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ABSTRACT

Technical reports of projects funded under the Elementary and Secondary Education Act Title I and summer components of the projects in the Philadelphia, Pennsylvania school system are presented. Following a summary statement, each project is described separately and contains information on the project's rationale, expected outcomes, mode of operation, previous evaluative findings, current implementation, and attainment of objectives. Summer program components focused on students in various institutions for neglected and delinquent children. Information for each component includes goals set, activities employed to attain goals, goals attained, goals not attained, and changes suggested by project administrators. Title I programs were divided into six categories: (1) comprehensive reading; (2) comprehensive mathematics; (3) programs for limited English-speaking-ability children; (4) social sciences; (5) supportive services; and (6) nonpublic school projects. (MH)

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EVALUATION OF TITLE I ESEA PROJECTS 1977-1978

Technical Reports

DEPARTMENT OF FEDERAL
EVALUATION RESOURCE SERVICES

TM008 297

OFFICE OF RESEARCH
AND EVALUATION

Report #7877

EVALUATION OF TITLE I ESEA PROJECTS, 1977-1978:

Technical Reports

An annual report issued by the Department of Federal Evaluation Resource Services, evaluating projects funded under Title I of the federal Elementary and Secondary Education Act. (Abstracts of these technical reports comprise Report #7876.)

October 1978

Office of Research and Evaluation

THE SCHOOL DISTRICT OF PHILADELPHIA

Philadelphia, Pennsylvania 19103

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This report was prepared by the Department of Federal Evaluation Resource Services. Assistance in evaluation design, instrument development, data analysis, and editorial matters was provided by the Division of Instructional Research and Development Services, Dr. Edward K. Brown, Director. Members of the project-evaluation teams are named in the Appendix.

Projects included in this report were funded under ESEA Title I and administered through the School District's Office of Federal Programs. USOE Grants #48-8411-51-500-01, #48-B-8476-51-500-01, #48-PA-77-1012, and #D8717.

PREFACE

This volume contains the technical reports of individual Title I project evaluations conducted during the 1977-1978 school year. It contains extensive information about each project's rationale, expected outcomes, mode of operation, previous evaluative findings, current implementation, and attainment of its objectives. In addition, the reader will be able to gain insight into the extensive evaluation activities that are intimately linked to each project.

Comprehensive evaluations have revealed that over the past 12 years Philadelphia's Title I projects have enabled administrators and teachers to create favorable learning environments, have reversed some of the historic trends toward drastic pupil underachievement, and have increased parental participation.

Evaluations required under Title I have given administrators an opportunity to discover and choose among alternative methods of improving instruction. It is hoped that the knowledge gained by systematic evaluation will be used to continuously upgrade the quality of services provided to target-area children.

Stephen H. Davidoff

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INTRODUCTION

For the past ten years, the Office of Research and Evaluation (ORE) of the School District of Philadelphia has conducted an annual evaluation of the projects funded under Title I ESEA. Since 1972, the Department of Federal Evaluation Resource Services, one of the five units comprising ORE, has produced the annual evaluations of Title I in two volumes -- The Technical Report and the Abstracts.

During the 1977-1978 school year, the reporting format has been modified to include the assessment of programmatic goals.

Programmatic goals were developed in response to two factors. First, the Title I program was reorganized into six project categories which are: Comprehensive Reading, Comprehensive Mathematics, programs for Limited English-Speaking-Ability Pupils, Social Sciences, Supportive Services and Nonpublic School Projects.

Second, the current state regulations for the evaluation of Title I require behavioral objectives which must account for 100% of the participants and which express gains in Grade Equivalent units.

The balance of this report is organized into the following sections: (1) Programmatic goals, (2) Evaluation Techniques, (3) Findings, (4) Discussion, (5) Summary and Conclusions, and (6) Abstracts of Project Reports.

PROGRAMMATIC GOALS

1. Comprehensive Reading

All participating eligible Title I students in Grades 1-12 will improve their reading skills to the extent that they will obtain the estimated grade equivalent gain for their respective grade between the pre (February, 1977) and post (February, 1978) administrations of the Vocabulary and Comprehension reading subtests of the California Achievement Test. The estimated average expected grade equivalent gain by subtest for each grade follows:

CAT READING SUBTESTS

Grade	Vocabulary Gain	Comprehension Gain
1	N/A	N/A
2	.50	.40
3	.65	.60
4	.67	.66
5	.62	.67
6	.68	.68
7	.66	.66
8	.56	.50
9	.58	.54
10	.59	.54
11	.63	.56
12	.64	.59

2. Comprehensive Mathematics

All participating eligible Title I students will improve their mathematics skills to the extent that they will obtain the estimated average expected grade equivalent gain for their respective grade between the pre (February 1977) and post (February 1978) administrations of the Computation and Concepts and Problems mathematics subtests of the California Achievement Test. The estimated average expected grade equivalent gain by subtest for each grade follows:

CAT MATHEMATICS SUBTESTS

Grade	Computation Gain	Concepts & Problems Gain
1	N/A	N/A
2	.40	.40
3	.36	.36
4	.57	.49
5	.62	.51
6	.62	.51
7	.63	.49
8	.63	.52
9	.62	*
10	.63	*
11	.64	*
12	.61	*

*Concepts and Problems subtest not given in Grades 9-12 during 1977. Therefore gain scores could not be computed.

3. Limited English-Speaking-Ability Programs

A. The longer a pupil is enrolled in a program for Limited-English-Speaking Ability (LESA) pupils, the higher he/she will score on the Test of Aural Comprehension of English (TAC), when the pupil's background is taken into account. A regression equation computed on tests administered in March, 1978 will show a statistically significant relationship ($p<.10$) between the length of time a pupil participated in these programs and TAC score when sex, age, grade, place of birth, mother tongue, and length of residence on the mainland are controlled.

B. Pupils enrolled in ESOL will show increased facility in speaking English, as demonstrated by a statistically significant correlation ($p<.10$) between the number of months a pupil was served in the program and score on speaking sections of the ESOL screening test, when the pupils' mastery of English at the time of enrollment is controlled.

4. Social Sciences

A. During the 1977-1978 school year, students in Grades 6-9 participating in the Education in World Affairs program (EWA) will improve their knowledge of global issues as evidenced by a significantly ($p<.10$) greater number of students demonstrating mastery between the Fall and Spring administrations of the Global Issues Vocabulary Test.

B. During the 1977-1978 school year, students in Grades 10-12 participating in the EWA program will improve their knowledge of concepts related to international affairs and the working of international politics as evidenced by a significant ($p<.10$) increase in posttest scores on the International Political Information Test administered in the Fall and Spring.

5. Supportive Services

A. School-Community coordinators will complete an average of 3.5 out-of-school conferences, seven for two days, including home visits for each day of service they provide each month to participating ESEA, Title I pupils in the areas of attendance, basic skills and work habits, behavior, health and the general well-being of these students. These conferences will emanate from school or self-initiated referrals. This will be verified by inspection of monthly reports and pupil referral forms maintained by the school-community coordinators.

B. School-community coordinators will provide in-school services to a minimum of 20 participating ESEA, Title I pupils each month relative to their needs or problems. This will be verified by inspection of monthly reports maintained by the school-community coordinators.

C. School-community coordinators will provide ten cluster meetings of parents of ESEA, Title I children each year related to topics of concern of needs of the children.

6. Nonpublic School Projects

The individual goals for each nonpublic school (NPS) project may be found within the NPS reports. This was done in order to accommodate the variety of projects.

EVALUATION TECHNIQUES

1. Comprehensive Reading

The following procedures were used in estimating pupil growth for each of the reading goals.

For eligible participating students in Grades 1-6, the distributions of CAT-70 Reading Vocabulary and Reading Comprehension scores were examined. All students falling within the 1st-15th percentile range were assigned an average percentile rank of 8 (the mid-point of that class interval). All students falling within the 16th-49th percentile range were assigned an average percentile rank of 33 (the mid-point of that class interval). The 8th and 33rd percentiles were converted to Grade Equivalent (GE) scores for each grade. These GE scores were multiplied by the number of students in each grade having that average and divided by the total number of students tested in each grade. This resulted in the estimated average GE per grade level for each subtest. This served as the estimated pretest score.

For eligible participating students in Grades 7-12 the distributions of CAT-70 Reading Vocabulary and Reading Comprehension scores were examined. Since the Title I eligibility for these grades is CAT-70 scores below the 26th percentile, an estimation of the number of students scoring below this criterion was needed. Those students scoring in the 1-15 percentile range were assigned an average percentile rank of 8. For students scoring within the 16-49th percentile range, a rectangular distribution of scores was assumed. Accordingly, one-third of the students falling within this range were assumed to fall below the 26th percentile. This percentile rank was converted to an average GE score and multiplied by one-third of the number of students in each grade falling within the 16-49th percentile range. This figure was added to the comparable figure for the 8th percentile, the total being divided by the estimated number of students scoring below the 26th percentile. This served as the estimated pretest score.

Once 1977 CAT scores were used to obtain pretest scores, expected gains in terms of GE were computed. The following formula was used:

$$\text{Expected Gain} = \frac{\text{Pre mean GE}}{\text{Grade (to nearest month at pretest)}} \times \text{Interval between Tests}$$

The 1977 and 1978 CAT reading scores were used to assess the GE changes of eligible participating students. Information was obtained on the number and percentage of eligible participating students who equaled, exceeded or failed to obtain the estimated average expected GE gain.

2. Comprehensive Mathematics

For eligible participating students in Grades 1-6 the distributions of CAT-70 Mathematics Computation and Mathematics Concepts and Problems scores were examined. All students falling within the 1st-15th percentile range were eligible. They were assigned an average percentile rank of 8, the mid-point of that class interval. The 8th percentile was converted to the grade equivalent (GE) score for each grade. This GE score was multiplied by the number of students in each grade assigned that average GE score. For each grade, the resulting value was divided by the total number of students tested in each grade. This resulted in the estimated average GE per grade level for each subtest. This served as the estimated pretest score.

For eligible participating students in Grades 7-12 the distributions of CAT-70 Mathematics Computation and Mathematics Concepts and Problems (up to Grade 8) scores were examined. Since the Title I eligibility for these grades is CAT-70 scores below the 26th percentile, an estimation of the number of students scoring below this criterion was needed. Those students scoring in the 1st-15th percentile range were assigned an average percentile rank of 8. For students scoring within the 16-49th percentile range, a rectangular distribution of scores was assumed. Accordingly, one-third of the students falling within this range were assumed to fall below the 26th percentile. This percentile rank was converted to an average GE score and multiplied by one-third of the number of students in each grade falling within the 16-49th percentile range. This figure was added to the comparable figure for the 8th percentile, the total being divided by the estimated number of students scoring below the 26th percentile. This served as the pretest score.

Once 1977 CAT scores were used to obtain pretest scores, expected gains in terms of GE were computed. The following formula was used:

$$\text{Expected Gain} = \frac{\text{Pre mean GE}}{\text{Grade (to nearest month at pretest)}} \times \text{Interval between Tests}$$

The 1977 and 1978 CAT mathematics scores were used to assess the GE changes of eligible participating students. Information was obtained as to the number and

percentage of eligible participating students who equaled, exceeded or failed to obtain the estimated average expected GE gain.

3. Limited English-Speaking Ability Programs (LESA)

A. Program evaluators and supervisors administered the Test of Aural Comprehension (TAC) in May, 1978 to all pupils who had studied in special programs for LESA pupils during the school year. Classes were divided at random into two groups. One half was tested with Form A, one half with Form B. A multiple regression analysis was computed to show the effect of variables on the score. The analysis was designed to show whether TAC scores increased more than could be expected if the pupils lived on the mainland but did not participate in the programs.

B. A random sample of pupils who were screened during the past two years and who were in the program were tested with the ESOL Screening Test in March, April, May and June. Part-correlations were used to determine if scores increased with increased exposure to the program when the English-speaking competence of the pupil at the time of screening was controlled.

4. Social Studies

A. A Global Issues Vocabulary Test was developed cooperatively by the evaluation team and the project staff. The vocabulary was drawn from the written materials and related activities provided by the project. The terms selected were judged essential for the students to be considered conversant in the areas studied. A mastery criterion was selected by the project staff. The test was administered in the Fall and Spring to a random sample of participating students in Grades 6-9. It was expected that a significantly ($p<.10$) greater number of students would demonstrate mastery in the Spring administration of the test than in the Fall.

B. An International Political Information Test was developed cooperatively by the evaluation team and the project staff. The test items covered information related to political, economic and social institutions drawn form the subscriptions, special briefing papers and related activities provided by the project. The test was administered in the Fall and Spring to a random sample of participating high school (Grades 10-12) students. It was expected that students' scores would show a significant ($p<.10$) increase on the posttest in the Spring.

5. Supportive Services

A/B.

School-community coordinators (SCCs) recorded their daily activities on a SCC Daily Log. They then summarized the data onto a Monthly Report. The data from the monthly reports were collected. Data from sample months

were tabulated and averaged. The evaluation team also conducted case studies with a sample of 2% of the SCCs by accompanying them during either a morning or an afternoon as they conducted their activities. These case studies were used to cross validate the activities recorded on the monthly reports.

C. An end-of-year fact sheet was collected from participating SCCs to determine the number of cluster meetings held and information related to these meetings.

6. Nonpublic School Projects

The techniques used to evaluate NPS projects are contained within their respective reports.

FINDINGS

1. Comprehensive Reading

Objective 1: All participating eligible Title I students in Grades 2-12 will improve their reading skills to the extent that they will obtain the estimated grade equivalent gain for their respective grade between the pre (February, 1977) and post (February, 1978) administrations of the Vocabulary and Comprehension reading subtests of the California Achievement Tests (CAT).

Table 1 contains the estimated grade equivalent gains, the number of pupils tested, and the percentage of pupils who achieved the estimated gain for each grade in the Vocabulary and Comprehension subtests of the CAT. In 14 (63.6%) of the 22 comparisons, a majority of the pupils obtained the estimated grade equivalent gain.

2. Comprehensive Mathematics

All participating eligible Title I students will improve their mathematics skills to the extent that they will obtain the estimated average expected grade equivalent gain for their respective grades between the pre (February, 1977) and post (February, 1978) administrations of the Computation and Concepts and Problems mathematics subtests of the California Achievement Tests (CAT).

Table 2 contains the estimated grade equivalent gains, the number of pupils tested, and the percentage of pupils who achieved the estimated gain for each grade on the Computation and Concepts and Problems subtests of the CAT. In 14 (77.8%) of the 18 comparisons, a majority of the pupils obtained the estimated grade equivalent gain.

3. Limited English-Speaking Ability Programs

The detailed evaluation findings are contained in the English to Speakers of Other Languages report.

4. Social Sciences

The detailed evaluation findings are contained in the Education in World Affairs report.

5. Supportive Services

The detailed evaluation findings are contained in the School Community Coordinators report.

6. Nonpublic School Projects

The detailed evaluation findings are contained in each of the Nonpublic School Project reports.

DISCUSSION

While annual evaluations have the advantage of determining the degree to which individual project goals are being attained, a longitudinal assessment of pupil progress would appear to have greater strategic value for the educational decision-maker and program planner. Even the use of broad programmatic goals, as reported above, is limited to a single 12-month period. The question becomes -- "How typical was this year in comparison to other years?" While projects and, indeed, programs may succeed or fail to attain annual goals, the fundamental question as to programmatic impact upon children must of necessity span several years in order to be adequately addressed.

In order to examine the longitudinal impact of Title I, California Achievement Test data from 1974 to 1978 (spanning the school years 1973-1978) were analyzed. Since the major thrusts of Title I are reading and mathematics, the total tests in these areas were used. The number of student scores for Reading was approximately 100,000 and for Mathematics 60,000. Two basic questions were asked:

1. Has there been a reduction in the percentage of children scoring below the national 16th percentile in Title I schools?

2. Has there been an increase in the average score attained by children in Title I schools?

The information dealing with the reduction of the percentage of children scoring below the national 16th percentile may be found in Table 3. Historically, the 16th percentile marks the upper limit of the lowest achievement category. Children below the 16th percentile are those who have achieved significantly less than their national peers, and by definition, are most in need of Title I services.

Since 1974, in each grade for each academic area, there has been consistent systematic reduction in the percentage of Title I children scoring below the 16th percentile. In Reading, the amount of reduction ranged from 16% in Grade 10 to 5% in Grade 12. City-wide, within Title I schools, there has been a reduction of 11%. In Mathematics, reductions of similar magnitude were noted. Since the distribution of scores has changed from 1974 (40% below the 16th percentile and 60% above) to 1978 (29% below the 16th percentile and 71% above), and since the total population is numerically almost constant (101,000 vs. 103,000), one can hypothesize that approximately 11% of the children have "achieved-out" of the lowest achievement category. This occurs when children attain higher test scores.

Following the above analysis, a determination was made as to the amount of average increase in Reading and Mathematics achieved between 1974 to 1978. These data are shown in Figures 1 and 2 for each grade level. The average achievement for each grade level in both Reading and Mathematics has increased consistently since 1974. The average child in each grade obtained higher achievement scores in 1978 than their 1974 grade-level counterparts.

SUMMARY AND CONCLUSIONS

To the degree that standardized test scores constitute evidence of the impact of programs/services upon pupils, five years of data appear to indicate that positive changes are taking place. Since the majority of the projects and services are essentially the same as those of 1974 and since the data span five years, neither the Hawthorne Effect nor the regression effect constitute viable rival explanations for why our children are doing better. It would appear that Title I makes a difference.

TABLE I

PERCENTAGES OF STUDENTS IN TITLE I SCHOOLS ATTAINING THE ESTIMATED GRADE EQUIVALENT GAINS IN READING

	Vocabulary			Comprehension		
Grade	Estimated GE Gain	Number Tested	Percent Attained	Estimated GE Gain	Number Tested	Percent Attained
2	.50	8274	73.5	.40	7967	62.1
3	.65	8221	47.7	.60	8142	59.6
4	.67	8219	49.0	.66	8226	49.1
5	.62	8631	48.4	.67	8603	53.6
6	.68	8677	58.3	.68	8665	56.7
7	.66	8278	55.7	.66	8255	49.5
8	.56	7989	60.1	.50	8017	59.3
9	.58	7316	60.8	.54	7226	61.5
10	.59	6322	49.7	.54	6264	57.2
11	.63	4734	35.0	.56	4720	38.4
12	.64	3742	52.9	.59	3719	55.4
Total		80403	54.6		79804	55.2

TABLE 2

PERCENTAGES OF STUDENTS IN TITLE I SCHOOLS ATTAINING THE ESTIMATED GRADE EQUIVALENT GAINS IN MATHEMATICS

	Computation			Concepts and Problems		
Grade	Estimated GE Gain	Number Tested	Percent Attained	Estimated GE Gain	Number Tested	Percent Attained
2	.40	8033	72.9	.40	8258	74.9
3	.36	8131	85.7	.36	8228	58.2
4	.57	8231	48.9	.49	8255	59.5
5	.62	8661	71.3	.51	8640	73.4
6	.62	8743	60.4	.51	8676	65.1
7	.63	8231	50.0	.49	8227	40.2
8	.63	7904	56.5	.52	7912	61.5
9	.62	6728	53.1	*		
10	.63	5356	51.5	*		
11	.64	4135	35.0	*		
12	.61	3478	40.0	*		
Total		46065	59.3		58196	61.9

*The Concepts and Problems subtest was not administered in Grades 9-12.

TABLE 5

THE PERCENTAGE OF PUPILS IN TITLE I SCHOOLS
WHO SCORED BELOW THE 16TH NATIONAL PERCENTILE*

GRADE LEVEL	TOTAL READING		TOTAL MATHEMATICS	
	1974	1978	1974	1978
1	15	10	18	10
2	23	14	25	12
3	31	22	35	19
4	33	23	47	32
5	43	32	45	30
6	42	29	46	33
7	48	34	57	44
8	47	33	58	45
9	47	34		
10	62	46		
11	64	58		
12	60	55		
TOTAL	40	29	41	28

*NOTE: The percentage of pupils in Title I Schools who scored below the 16th national percentile, indicating low achievement, has been substantially reduced since 1974 in each grade level.
Total Mathematics scores were not available in 1974 for grades 9-12 since the concepts and problem subtest were not administered until 1978.

TITLE I PROGRAMMATIC ACHIEVEMENT
READING ACHIEVEMENT 1974-1978
- CITYWIDE -

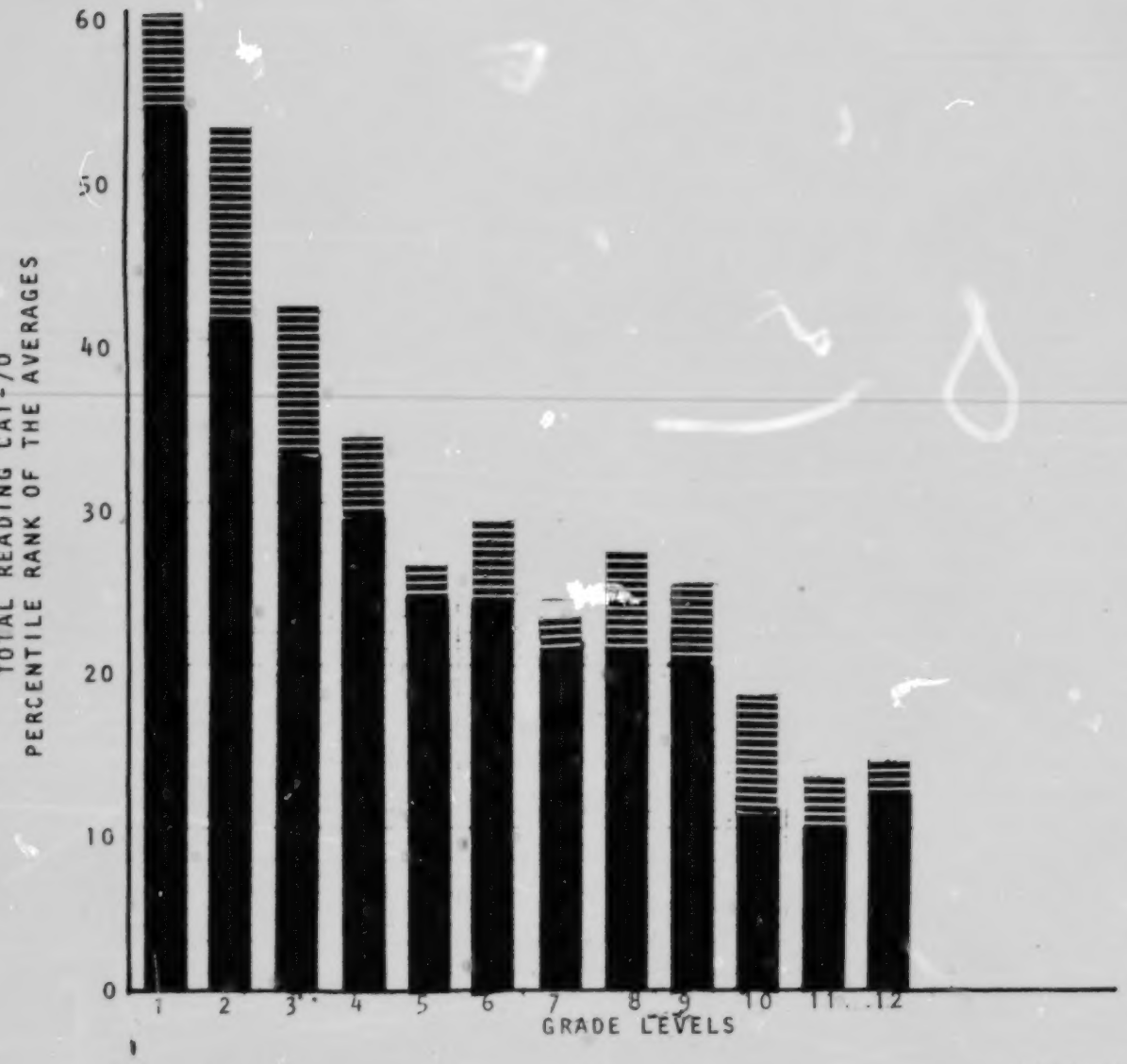

Figure 1. The average percentile for each grade 1-12 increased from 1974 to 1978. This means that the average achievement for each grade level, as measured by CAT-70, has increased.

CITYWIDE TITLE I COMPARISON OF
MATHEMATICS ACHIEVEMENT BETWEEN 1974 AND 1978

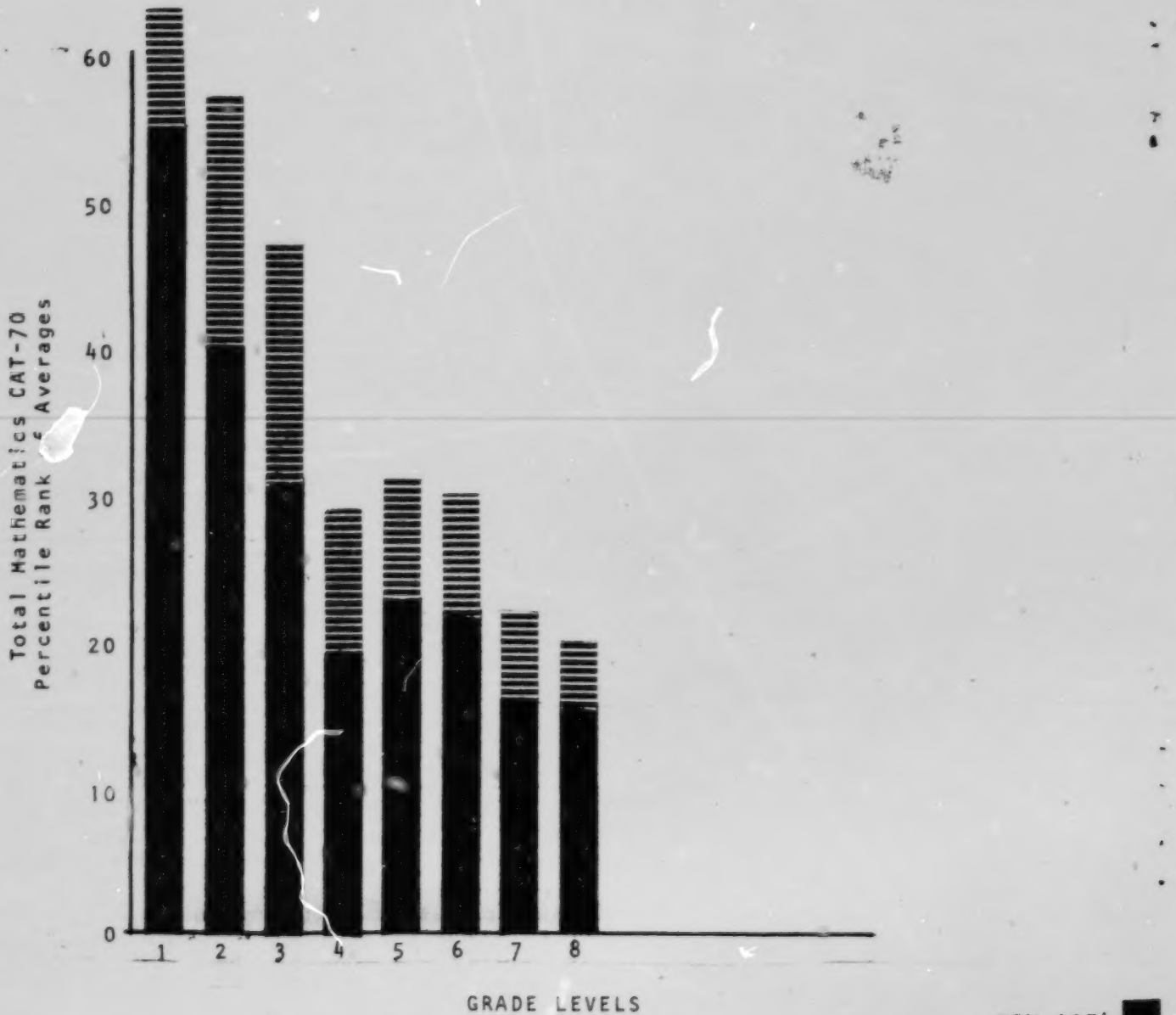

Figure 2. The average percentile for each grade 1-8 increased from 1974 to 1978. This means that the average achievement for each grade level, as measured by CAT-70, has increased.

AFFECTIVE EDUCATION

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Affective Education project (AEP) has three major areas of emphasis: (1) to improve the acquisition of basic academic skills; (2) to teach teachers a variety of techniques and approaches that will create a more favorable learning climate; and (3) to foster greater communication and understanding between parents and their children and between parents and teachers.

The project is organized into four branches: (1) the Communications Network (CN) works with groups of teachers from several schools over a one- to three-year period. CN has developed new curricula, techniques, and approaches that integrate reading, writing, speaking, and listening; (2) the Parent Training (PT) component offers intensive training for parents from a single school over a ten-week period; (3) Resource Services (RS) offers a variety of workshops and longer-term support groups and courses for teachers, aides, and administrators in the use of affective curricula and specific affective teaching techniques; and (4) the School for All Ages (SFAA) functions as a developmental model for increasing the age range of student interaction by promoting cross-age and cooperative learning experiences.

RATIONALE

AEP attempts to meet the needs of teachers, students, and parents through development of new curricula and teaching techniques, creation of more humanistic classroom climates, prevention and removal of psychological blocks to learning, improvement of self-image, and provision of a resource center, in-service courses, and teacher and parent affective training.

The specific problems or needs which affect or otherwise pertain to teachers include (a) difficulty in developing and applying curricular and teaching approaches which prevent or decrease failure patterns and blocks to the learning of communication skills, (b) an expressed sense of isolation in their work, (c) an expressed sense of frustration, (d) an expressed sense of role insecurity, (e) a loss of personal autonomy, (f) difficulty in developing life-relevant curricula and teaching techniques, and (g) a relatively high turnover rate.

The specific problems or needs which affect or pertain to students include (a) poor achievement in school subjects, especially communication skills, as indicated by scores on standardized achievement tests, (b) difficulty in relating

course content to their personal lives, (c) low secondary school retention, (d) chronic absence and lateness, (e) negative acting-out behaviors, (f) expressed feelings of a lack of identity and a lack of control over one's personal life and environment, and (g) a dislike for school.

The specific problems or needs which affect or pertain to parents include (a) expressed desire to support and augment their children's learning, especially reading, writing, listening, and speaking, (b) belief that school does not serve the real needs of their children, especially in the upper grades, and (c) expressed feelings of alienation toward "schooling".

EXPECTED OUTCOMES

AEP is designed to provide introductory workshops, in-service courses, and CN training programs for school personnel and parents. The development and dissemination of process-oriented curricula, and the establishment or maintenance of affective target schools or units within target schools are additional anticipated outcomes of the project.

It is anticipated that students who receive most or all of their instruction from teachers who have participated in RS or CN training sessions will maintain or improve reading, writing, speaking, and listening skills, evidence increased school attendance, acquire fewer disciplinary referrals, improve their attitudes toward school and learning, and evidence positive attitudes toward their teachers and peers.

PREVIOUS FINDINGS

During the project's initial years of operation (1968-1970), efforts were concentrated on the development of appropriate curricular materials and training procedures.

In the years 1970-1973, comparisons with non-AEP students suggested that affective students understood themselves better, were able to generate more solutions to problems, were able to use more explicit language in describing their feelings, and had more positive attitudes toward themselves, their teachers, and their classes. Affective students were found to attend school more frequently and to have fewer discipline referrals than a comparison group of students. Participating teachers indicated that they felt they were dealing with disciplinary matters more constructively than before their participation.

Students reported that they felt they had improved in academic achievement. This was substantiated in 1972-1973 when affective students in the middle school showed significantly greater improvement in reading achievement than non-AEP students.

In 1973-1974, affective students did as well as or significantly better than non-affective students in reading comprehension and vocabulary on the California Achievement Tests (CAT). On a semantic differential survey, high school affective students attained significantly higher scores than comparison students regarding their attitudes toward school.

Affective students attended school significantly more often than comparison students at the secondary and intermediate levels, but not at the elementary level. Affective students had significantly fewer disciplinary referrals than comparison students. At the elementary level, 83% of the affective students gained one or more reading-book levels as measured by an informal reading inventory (IRI); 61% gained two or more book levels.

In 1974-1975 the project continued to meet the needs of teachers, students, and parents through programs provided by its RS and CN components. Specifically, it was successful in developing new curricula, disseminating information, providing in-service courses, maintaining a resource center, conducting short-term teacher and parent training, encouraging the frequent use of affective teaching techniques, delivering CN training, resources, and follow-up, improving reading levels of third-, fourth-, and fifth-grade students, and improving reading comprehension at the secondary level. The project had partial success at the secondary level pertaining to student attendance, student attitude toward school, student discipline, and students' ratings of teachers.

In 1975-1976, pupils in classrooms of teachers trained by AEP achieved significantly higher reading achievement scores (vocabulary and comprehension) than a comparison group of nonproject pupils; exhibited a significantly greater willingness to write and generally wrote more competent stories than a comparison group of non-project pupils; and tended to persist in reading during a sustained silent reading period for a significantly greater proportion of time than non-project pupils.

In 1976-1977 students in AEP programs improved their reading comprehension skills to the extent that (a) a significantly greater number of students demonstrated mastery on a series of criterion referenced tests of reading comprehension skills; (b) expected proportions of project students made at least one-year's progress in reading; and (c) expected proportions of project students gained at least two book levels as measured by an informal reading inventory. Moreover; AEP students (a) persisted on a reading task for a significantly greater proportion of time; (b) provided more complete definitions of the terms cooperative, competitive, independent, and dependent; and (c) provided more detailed verbal descriptions of pictures depicting the four learning modes.

EVALUATION OF THE CURRENT YEAR

The current year's evaluation of AEP focused on (1) changes in the reading comprehension skills of project students (2) changes in reading persistence of project students during sustained silent reading periods, (3) the implementation of mastery learning concepts in project classrooms, and; (4) the training of the parents of school children in AEP classrooms.

IMPLEMENTATION

During the 1977-1978 school year, the Communications Network (CN) division worked with teachers, aides, administrators and parents to create the conditions in the classroom and in the home that allow children to develop histories of success in learning; positive associations with reading, writing, listening, and speaking; and thought patterns and habits that support reading achievement. During the current school year, this division conducted 72 hours of workshops for 63 teachers new to the program; 68 hours for 20 second-year participants, 36 hours for 30 aides, 9 hours for 12 administrators, and 16 hours for more than 120 parents. Each month throughout the school year, first- and second-year teachers' groups convened for one whole-day workshop and for one after-school meeting.

The evaluation team participated in five of these all-day sessions. The topics for these sessions included: emotional and psychological blocks to learning; integrating reading, writing, listening, and speaking; teacher expectations; overcoming histories of failure; and processing to crystallize learning. Each session was well-organized and efficiently conducted. The trainers appeared knowledgeable and skillful in working with a large group of teachers, administrators, and/or aides. The participants appeared enthusiastic, motivated, and encouraged by their new learnings. Absences at these sessions were rare.

Intensive classroom follow-up for all participants was an integral part of the training experience. Each member of the training team was assigned a group of teachers and/or aides for follow-up experiences. The trainer visited each participant at least one time each month for observation, consultation, discussion, and/or demonstraton.

Four days of observations of some of these follow-up sessions by the evaluation team revealed the critical nature of these activities. All of the teachers observed appeared to be encouraged and energized by the professional support, thankful and gracious for the morale boost, and open to all suggestions and/or criticisms. It was also apparent during these observations that the teachers and/or aides had benefitted from their monthly training experience as evidenced by their expressed understanding of the new concepts and techniques, by their implementation of these techniques and activities during the observations, and by the numerous displays (charts, posters, homework, projects) in each room which resulted from previous implementation of these new activities and ideas.

The Parent Training (PT) division conducted a number of intensive training sessions for parents. In each of six schools, a ten-week schedule of weekly sessions took place. A total of 167 parents were involved in these experiences. In addition, short-term training for parents was also provided. A total of 900 parents from 45 schools participated in 1 to 7 sessions each. The topics covered in parent training sessions included active listening, conflict resolution, family scripting, "I" message, communication skills, discipline versus punishment, creative play, and test-taking. Written evaluations were collected by the training team after most of the long-term sessions were completed. It was reported that these evaluation forms were reviewed by the training team to determine possible changes in subsequent training sessions. These evaluation forms were submitted to the evaluation team for review.

The Contract Services division sponsored general training and information sharing to assist educators in their efforts to improve students' motivation for learning and to facilitate students' acquisition of basic skills. Areas of emphasis during the current school year included classroom limits and boundaries, test-taking skills, expectations, cooperation versus competition, affective teaching techniques, and self-concept. The division reported conducting workshops for 2,100 teachers (1,000 attending more than one workshop), 100 classroom aides, 220 principals, 75 supervisors, and 60 counselors. Direct services were provided to 53 Title I schools. In addition, long-term services were provided at three schools where monthly sessions (for a total of 51 teachers) covered such topics as self-esteem, expectations, limits and boundaries, helping relationships, and shared responsibility. Also, extended faculty meetings were offered to two schools for a total of 135 teachers. This service included two half-day faculty workshops and individual teacher follow-ups when requested.

The School for All Ages (SFAA) division sponsored one special school within the Philadelphia school system. The school promoted three goals: age integration development of cooperative learning settings and appropriate uses of the cooperative, competitive, individualistic, and dependent styles of learning. This division conducted staff development for the faculty of the school and for teachers working on the same goals in other Philadelphia schools.

The 17 teacher participants were provided with five, 3-hour training sessions dealing with topics such as adult learners, cooperative learning structures, and mastery learning. A group of 6 teachers met every month for 2 hours to receive additional study in mastery learning. In addition staff of the selected school attended a total of 20 hours of training aimed specifically at problem-solving with regard to the implementation of the school's goals.

It should be noted that the project originally sponsored two special schools prior to the beginning of the 1977-1978 school year. During the budget crisis of the summer of 1977 the entire project was scheduled for elimination. However,

intensive efforts by parent groups at the Logan School influenced it's reinstatement. Unfortunately, additional problems confronted the school's continued positive growth of the previous years. The school was forced to leave its location at the Muhlenberg Lutheran Church because of an unreasonable rental increase. A new site was located within a few blocks of the old site, but delays in the signing of a new lease postponed the actual opening of school until mid-October. As a result, some of the school's students enrolled in other public schools and did not choose to return to SFAA. However, under the leadership of the school's first principal (in previous years the school was administered by a coordinator), the school year began in an orderly, constructive way continuing the positive successful practices from previous years but modified by the more traditional influence of the new principal.

The December 1977 validation of the School for All Ages by the Pennsylvania Diffusion Panel led to a developer/demonstrator grant permitting dissemination of the Adult Program to three Philadelphia secondary schools. A group of 25 people, from these secondary schools, including teachers, administrators, community people, and students, received a 20 hour training sequence. All three schools intend to implement programs for adult students in the 1978-1979 school year.

ATTAINMENT OF OBJECTIVES

Objective 1: During the 1977-1978 school year, students participating in AEP programs will improve their reading comprehension skills as evidences by a significantly ($p<.10$) greater number of students demonstrating mastery on the School District of Philadelphia's Criterion-Referenced Tests of Comprehension Skills between Fall and Spring administrations of the test series.

Attainment of this objective could not be determined because the Philadelphia Criterion-Referenced Tests of Reading Comprehension Skills were judged to be inappropriate measures of project effectiveness. The project staff selected the Informal Reading Inventory (IRI) and the Phonics Inventory as supplemental measures of reading skill development. These measures were administered as pretests (Fall) and posttests (Spring).

The IRI results for 177 students in grades 2-5 are summarized in Table 1. The Phonics Inventory results for 140 students in grades 1-6 are summarized in Table 2. The IRI data indicate that 70% (124) of the students progressed at least two book levels in reading comprehension. In addition, the Phonics Inventory data indicate that the percentage of students achieving mastery on the posttest was greater than the percentage achieving mastery on the pretest for all nine of the subtests (initial consonants, final consonants, rhyming works, blends, digraphs, three-letter combinations, final sounds, vowel sounds, and other vowel sounds).

Objective 2: During the 1977-1978 school year, students participating in AEP programs will show significantly ($p<.10$) greater persistence on a reading task (sustained silent reading) between Fall and Spring administrations of the Reading Persistence Summary.

This objective was attained.

Using a set of books of appropriate reading difficulty and suitable interest the evaluation team conducted Sustained Silent Reading periods in twelve Communications Network Classrooms during the Fall and Spring. These 12 classes were selected by project staff as appropriate for this evaluation procedure.

During a sustained silent reading period, students select an appropriate book for reading, no one is permitted to bother anyone else including the teacher, and noise is generally not permitted. The project staff believed that CN pupils would persist in reading for greater proportions of time as the school year progressed. Persistence was defined as continuous eye-contact with the selected book. The sustained silent reading period was chosen by the evaluation team as the most appropriate setting for measuring persistence.

After the pupils had utilized a three-minute period for book selection, the evaluator began data collection. Records of each of five randomly selected students' persistence in reading their self-selected books were recorded on the Reading Persistence Summary form. The records included a "+" for eye contact with the book or a "0" for non-eye contact. The evaluator entered as many records as possible for each of the five pupils during the first five minutes of the period. Judgments were determined instantly when the evaluator looked at each pupil.

Reading-persistence scores indicate the percentage of time during which students persist in reading during the sustained silent reading period. The mean Fall pretest score was 54.1% and the mean Spring posttest score was 71.0%. The positive difference of 16.9% was significant beyond the .10 level.

Objective 3: During the 1977-1978 school year, students participating in AEP classroom will rate their teachers significantly higher ($p<.10$) on the behavior of (a) communicating the expectation that all students can master the materials, (b) specifying learning competencies, (c) providing learning alternatives, or (d) grading by an objective criterion, as evidenced by pre and post administrations of the AEP Teaching Practices Questionnaire.

Attainment of this objective could not be determined because (1) pretest results were of a sufficient magnitude to preclude the possibility of a significant positive change in scores between pretest and posttest, (2) only one of the six participating teachers was able to complete all phases of a unit of study employing mastery techniques, and (3) only two of these teachers were able to administer the posttest, while the remaining teachers did not notify the evaluation team in sufficient time to allow posttesting.

The results from the analysis of pretest and posttest scores from the two classes indicated, as expected, no significant difference. All of the resulting data are being used to revise the instrument for use during the 1978-1979 school year.

It should be emphasized, however, that the exploration and implementation by this group of teachers in such an experimental effort was both extensive and intensive. Their learnings should provide invaluable baseline data for the project's second year of work in their area of mastery learning. Mastery learning is an educational philosophy and methodology first articulated by Benjamin Bloom which holds that the educational bell-shaped curve is obsolete. Given a sufficeint amount of time and a variety of teaching styles, 95% of all students can learn standard school curriculum to a level of excellence.

Objective 4: During the 1977-1978 school year, the Affective Education Parent Training Program will provide intensive long-term training experiences for at least 75 parents from 5 schools with the following expected outcomes: (1) at least 60% of these parents will attend at least 80% of the regularly scheduled training sessions and (2) at least 50% of these parents will complete at least 10 suggested activities with their children during the final 6 weeks of their training experiences as recorded on the AEP Parent-Child Activity Log.

This objective was partially attained. Part 1 was not attained. Part 2 was attained.

A total of 167 parents from six school communities participated in long-term training experiences. These experiences included at least one 2-hour session for each of at least ten weeks. The content of the sessions focused on active listening, "I" messages, play interventions, discipline versus punishment, and helping the young child develop independent thought patterns. Attendance at these sessions was recorded on special sign-in sheets. The project staff suggested a number of homework-type activities to be completed by the parent participants with their children before the next week's training sessions. These activities included special trips to libraries, stores, museums, parks, or any area of interest, reading sessions where parent and child read to each other, family rituals provided by the trainers, social-skill activities, and table -talk activities. Any completed activities were recorded on a special Parent-Child Activity Log and collected at each training session.

A total of 33 (20%) parents attended at least 80% of these regularly scheduled training sessions. Of these 33 parents, 25 (76%) reported completing at least ten suggested activities with their children during the final six weeks of their training experiences. Moreover, the total group of 167 parents reported completing a total of 906 activities. However, it should be noted that nearly half (432) of these 906 activities were completed by the 33 parents who attended at least 80% of the training sessions. This suggests the importance of regular attendance at training sessions as an indicator of project impact in the lives of the participants.

SUMMARY AND CONCLUSIONS

The project was fully implemented according to its intended mode of operation. The four branches of the project, Communications Network, Parent Training, Contract Services, and the School for All Ages provided extensive training throughout the school year for School District personnel and parents.

Two of this year's objectives were attained or partially attained. The attainment of two additional objectives could not be determined because of inappropriate test selection or because of inadequate posttesting.

It was found that students participating in AEP programs persisted during sustained silent reading periods for a significantly greater proportion of time from the beginning to end of the current school year. In addition, expected numbers of parents received intensive long-term training and reported having completed at home an expected number of special activities with their children. Although students in the Mastery Learning group were not able to be tested, their teachers explored the concepts of mastery learning and attempted, in the late Spring, to complete a single unit of study using the mastery approach. Their experiences and learnings should provide important data for the project's second-year plans dealing with mastery learning.

Finally, the School for All Ages was granted a developer/demonstrator grant by the State, permitting dissemination of the Adult Program to three Philadelphia secondary schools. All of these schools are planning programs for adult students in the 1978-1979 school year.

TABLE I

BOOK LEVEL GAINS ON THE INFORMAL READING INVENTORY ADMINISTERED TO AEP STUDENTS IN FALL AND SPRING

Number of Book levels Gained	Number of Students	Percent Students
0	10	6%
1	43	24
2	60	34
3	20	11
4	20	11
5	14	8
6	3	2
7	7	4
Totals	177	100

TABLE 2

PERCENTAGE OF STUDENTS ACHIEVING MASTERY
ON PRETEST AND POSTTEST ADMINISTRATIONS
OF THE PHONICS INVENTORY

Subtest	Percent of Students Achieving Mastery Pretest	Posttest
Part A		
Initial Consonants	77%	8?%
Final Consonants	77	81
Rhyming Words	76	78
Part B		
Blends	58	73
Digraphs	79	87
3-Letter Combinations	71	92
Final Sounds	62	72
Vowel Sounds	41	55
Other Vowel Sounds	25	48

BENCHMARK

This project serves underachieving pupils in reading and mathematics by providing selected teachers and aides in self-contained classrooms with emphasis placed on basic skills.

RATIONALE

Ongoing analyses of pupil achievement in Grades 4-6 indicate very high percentages of underachieving children. Many of these children are considered to have the potential to attain needed skills in reading and mathematics. Providing an informal instructional setting with 20 children assisted by a teacher and an aide has proved to be a viable approach to assisting these children.

Personal attention and individualized diagnosis and prescription are the keystones of the project. Having two groups allows great latitude for scheduling.

EXPECTED OUTCOMES

Pupils are expected to attend school more frequently, to develop acceptable social patterns, and to improve their skills in reading and mathematics.

PREVIOUS FINDINGS

In 1976-1977 the project continued to be fully implemented. Project pupils increased their achievement levels in both reading and mathematics. Phonics mastery was achieved by 53.6% of the children; 86.8% gained one instructional book level and 61.6% gained two or more levels. In mathematics, 88% gained one level, and 54% gained two or more levels. The median mathematics instructional level was seven at the end of the year.

EVALUATION OF THE CURRENT YEAR

Pretests in reading and mathematics were administered early in the school year to provide baseline data for the evaluation and diagnostic data for the teacher to prescribe remedial work. Posttest scores were compared with the pretest scores to determine gains in achievement. Systematic observation of the instructional process was conducted by the evaluation team.

IMPLEMENTATION

The Benchmark Project continued to serve 31 Title I elementary schools. Two teachers from each school were assigned to work with two classes of children selected for their low reading and mathematics scores. Most classes maintained a pupil teacher ratio of 20 to 1.

The teachers instructional schedule was changed from that of the previous two and a half years. The self-contained classroom was maintained, but each teacher was required to serve each class for 50% of the allotted time. The teacher paid from Title I funds was to provide only remediation in reading and mathematics. The other teacher, paid from operating budget funds, was to teach the mandated school curriculum.

Both teachers were assisted by aides assigned to the project, and paid from the Title I budget. Due to a city-wide reassignment of aides, many of those assigned to Benchmark needed to be trained in the methods and techniques of the project.

The new instructional process was implemented during October. Teachers at most sites tried to run the program according to the new guidelines, but at some sites they developed variations of the half-day theme to meet unique scheduling problems.

Before November, teachers were voicing their concerns related to problems they perceived with the new instructional strategy. They indicated that: sharing the pupils and instruction meant a loss of time for them; there was now a need for more planning and coordination and no time scheduled for it, and that there was a loss of familiarity with the pupils since they now served 40 rather than 20.

A questionnaire completed by teachers in November indicated that pupil attendance, homework, and class effort had slipped. They complained about more record keeping, about wasted pupil movement as pupils packed, unpacked and shifted from one room to another. By the end of the year, teachers were insisting that a new model be developed. They preferred the single teacher, self-contained classroom model.

Teachers reported that their role as the "teacher" had been diminshed because each teacher served two groups. Teachers also indicated that pupils had lost that feeling of belongingness that develops between the class and the teacher.

Analysis of 13 structured classroom observations indicated that teachers continued to work with individuals, small groups, and the total class. Reading and mathematics instruction were observed being given approximately equal emphasis. Materials used were multi-level and multi-media oriented. Seating arrangements in rooms encouraged group procedures and individualization. Teachers and aides tended to move around the room working with groups or individual children. Pupil behaviors and attitudes tended to be positive. Children worked at their assigned tasks in a relaxed manner. Teachers rarely had to rebuke pupils for poor behavior.

The project director worked closely with his team of three field coordinators who were responsible for communication, staff development, and problem resolution among teachers and aides. One coordinator went on sabbatical for several months and was replaced by a project teacher during his leave.

Aides provided a valuable service to the project by working with individuals or groups of children under the direction of the Benchmark teacher. Aides primarily worked with the children, but they also marked class assignments and homework, scored tests, filled out forms, prepared materials for lessons, and returned materials to the storage areas. Rapport between aides and teachers, and between aides and pupils, appeared to be quite high.

ATTAINMENT OF OBJECTIVES

Objective 1: By the end of the school year 50 percent of the pupils with 80 percent attendance will achieve 90 percent mastery of the word-recognition skills measured by the Sight and Sound Inventories A and B.

This objective was attained.

The Sight and Sound Inventory was administered to pupils in October and April. The tests were scored by an optical scanning device and printouts of item results were sent to all teachers a week or two after the tests were administered. The test measured the ability of the pupils to hear and select the correct initial or final consonant sound, rhyming words, blends, digraphs, three letter combinations, final sounds, and vowel sounds.

During the school year the teachers, assisted by the aides, worked with the phonics elements that were most difficult for the individual children. Pretesting indicated that only 64% of the pupils had a knowledge of 75% of the items in the test. Posttesting showed that 83% of the pupils had a 75% knowledge of the items at the end of the year. Of the 970 pupils in grades four, five, and six who attended a minimum of 80% of the days, 52% attained a mastery level of 90% correct or more. Of this group, the sixth graders had the highest number and percentage. When viewed according to years of service in the project, first year pupils showed the most gain.

Objective 2: By the end of the school year 70 percent of the pupils with 80 percent attendance will gain the reading skills of one book level as measured by teacher scoring of a Standardized Individual Reading Inventory.

This objective was attained.

During October pupils were individually tested by the Benchmark teachers using the established procedures of the McCracken Standard Reading Inventory. Pupils were scored based upon their independent, instructional, and frustration levels. Scores were recorded based upon a system of book level equivalents in multiples of five. Book 1 equaled 15, Book 2 equaled 20, Book 2^2 equaled 25 and so on. Using this system it was determined that the October median instructional level was 16.25 (slightly higher than a Book 1) and the May instructional level was 28.55 (between a 2^2 and a 3).

Of those pupils attending regularly, 79% improved their inventory level by one book or more. The data indicated that 21% of the pupils showed no gain, 22% improved by one book level, and 57% gained two books or more. Among average classes, two books growth a year is considered acceptable growth.

Objective 3: By the end of the school year 60 percent of the pupils with 80 percent attendance will gain one level as measured by the Philadelphia Mathematics Evaluation Tests.

This objective was attained.

During the year pupils are tested with the Philadelphia Mathematics Evaluation Tests to determine their mathematics skill levels. The tests are domain referenced and hierarchial in nature. When the teacher judges that the pupil has mastered a set of skills, the test is given. End-of-year results indicated that 15% of the pupils made no gains. Of those pupils with 80% attendance, 38% gained one level, 33 gained two levels, and 13% exceeded two levels.

SUMMARY AND CONCLUSIONS

For the fourth year, the Benchmark Project was able to improve the skills of pupils with extensive deficiencies in the areas of reading and mathematics. In phonics skills, 52% of the pupils who attended regularly attained a 90% level of mastery. Based upon an individually administered reading inventory, 57% of the regularly attending pupils gained two instructional book levels. In the area of mathematics 46% of the regularly attending pupils gained two levels or more based upon the administration of the Philadelphia Mathematics Evaluation Tests. Each of these attainments exceeded the objectives of the project.

Although the mandated mode of implementation (requiring teachers to serve both Benchmark classes in the school for a half day, everyday) was viewed negatively by the teachers, the program was still able to effectively help participating Title I children meet their educational needs. Pupils and teachers preferred the one teacher, one class, self-contained classroom instructional program.

TABLE 1

READING LEVELS OF BENCHMARK PUPILS WITH 80% ATTENDANCE
BASED UPON A STANDARDIZED READING INVENTORY
BY GRADE LEVEL

Change Occurring between Pretest and Posttest	Grade 4	Grade 5	Grade 6	Total N	Total %
Two or more books	170	201	180	551	57%
One Book	89	63	59	211	22%
Loss or No Gain	77	84	45	206	21%
	336	348	284	968	100%

TABLE 2

BENCHMARK PUPILS WITH 80% ATTENDANCE ATTAINING MASTERY
ON THE SIGHT AND SOUND INVENTORY

	By Grade Level				
Mastery Level Attained	Grade 4	Grade 5	Grade 6	Total N	Total %
90% - 100%	130	179	201	510	52%
75% - 89%	130	117	59	306	31%
Below 75%	78	52	24	154	17%
	338	348	284	970	100%

	By Years				
	One Year	Two Years	Three Yrs	Total N	Total %
90% - 100%	239	211	59	509	52%
75% - 89%	180	105	25	310	32%
Below 75%	106	47	12	165	16%
	525	363	96	984	100%

TABLE 3

GAINS IN MATHEMATICS OF BENCHMARK PUPILS WITH 80% ATTENDANCE BASED UPON THE PHILADELPHIA MATHEMATICS EVALUATION TEST

Gains	Grade 4	Grade 5	Grade 6	Total N	Total %
3 levels or more	25	53	47	125	14
2 levels	111	89	101	301	33
1 level	136	120	96	352	38
Loss or no change	46	66	29	141	15
Total	318	328	273	919	100%

BILINGUAL EDUCATION

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Bilingual Education project, formerly two projects, Bilingual Education and English As A Second Language-Readiness, has three components: Component A, Carino Center, and Component B, Bilingual Auxiliary Teachers, attempt to correct the basic academic skill deficiencies of Spanish-speaking children in the nonpublic elementary schools; and Component C, English As A Second Language-Readiness, attempts to provide Spanish-speaking children with kindergarten experiences structured to develop English language competency and readiness skills.

RATIONALE

It is the primary assumption of this project that basic skill deficiencies of the Spanish-speaking children in the target area schools are generally attributable it inadequate development of language skills, especially English. The Bilingual Education project provides services to meet the needs of these children by developing their English and Spanish language skills and by developing basic academic skills.

EXPECTED OUTCOMES

It is expected that through the efforts of the Bilingual Education project, Spanish-speaking elementary grade pupils will demonstrate increased achievement in basic skill areas, and kindergarten pupils will demonstrate.

PREVIOUS FINDINGS

For Components A and B, during the first three years of the project (1972 through 1975), none of the project's congnitive objectives was attained. However, for the past two years (1975 through 1977), all of the objectives were attained.

For Component C, previous evaluations consistently indicated that the project was at least partially successful in meeting its goals of developing English language competency and readiness skills. In 1976-1977, there was particular success in mathematics readiness, as measured by the KeyMath Diagnostic Arithmetic Test.

EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the Bilingual Education project focused on project implementation and pupil's progress in English reading and mathematics.

Also, for Component C, there was additional focus on the degree to which the pupils developed their readiness (measured by the Stanford Early School Achievement Test) and the degree to which they improved their English language skills (as measured by the James Language Dominance Test).

IMPLEMENTATION

The project's intended mode of operation was fully implemented.

Fifty-four pupils (grades 4-8) with limited English-speaking ability attended the Cariño Center. They received daily instruction in mathematics, social studies, reading, language arts, ESOL, and Spanish. In order to meet specific skill needs, pupils were individually rostered into small, homogeneously-grouped classes. The language of instruction (English and/or Spanish) also varied according to pupils' needs.

Full-time auxiliary teachers were assigned to five participating schools. All of these teachers provided instruction to groups of two to eight pupils for 30 minutes to one hour daily. Subjects taught and grades served varied according to the needs of the individual schools.

English-as-a-Second-Language-Readiness centers were located in six schools. Each was staffed by a teacher and one or two bilingual aides. Four-and-five-year-old children attended the centers for approximately 3 hours each day. The instructional programs stressed development of pupils' English-language skills. Pupils also received training in perceptual, motor, mathematics-readiness, and reading-readiness skills. Teachers used both English and Spanish as the instructional language, but by March, they were using English almost exclusively.

ATTAINMENT OF OBJECTIVES

Objective 1: Participating kindergarten pupils will improve their English language skills to the extent that, between the September and May administrations of the James Language Dominance Test, 75% of the pupils classified as Spanish Dominant will advance to another category (indicating a greater degree of bilingualism), and the mean score for all pupils on the English subtest will increase significantly ($p<.05$).

The objective was attained.

The James Language Dominance Test was administered to 160 pupils in September and again in May. Pretest scores on the 40 item English subtest ranged from 0 to 40, with a mean of 28.74(s.d.=7.84). Posttest scores ranged from 15 to 40, with a mean of 37.16 (s.d.=13.01). The 8.42 pretest to posttest gain was found to be statistically significant (t=21.34, p<.005).

This test also provided for classification of pupils into language dominance categories ranging from 1 (Spanish Dominant) to 5 (English Dominant). The distribution of pupils according to language categories is presented in Table 1. Of the 77 pupils classified as Category 1 on the pretest, 65 (84% advanced to Categories 3, 4, and 5 on the posttest. This exceeded the expectation that 75% of these pupils could advance at least to Category 2.

Objective 2: Participating kindergarten pupils will develop their reading readiness skills to the extent that, in May, they obtain a mean raw score of 18 on Part 3 (Letters and Sounds) and on Part 4 (Aural Comprehension) of the Stanford Early School Achievement Test (SESAT).

This objective was partially attained. The criterion was exceeded for the Letters and Sounds subtest, but it was not met for the Aural Comprehension section.

The criterion scores applied to Parts 3 and 4 of the SESAT were the respective mean scores obtained in 1976-1977 by pupils in District 5. (Four of the Bilingual Education kindergarten centers are located in that district.)

The two SESAT subtests were administered to 201 pupils in May. The distribution of scores is presented in Table 2. On the Letters and Sounds subtest, project pupils attained a mean score of 20.26 (s.d.=6.27) which exceeded the criterion score. On the Aural Comprehension subtest project pupils' mean score was 17.25 (s.d.=4.66), less than 1 point below the criterion.

Objective 3: Participating pupils in Grades 1-8 will increase their instructional reading level to the extent that, between September pretest and May posttest, 75% of them will gain at least one book level, as measured by a group informal reading inventory(Cariño Center component) or a basal reading series mastery test (Auxiliary Teacher component).

This objective was attained.

An informal reading inventory was administered to 58 Cariño Center pupils in September and in May. From pretest until posttest, 88% of them advanced one or more book levels, and their median gain was 2 book levels.

For the 52 pupils receiving language skills instruction from the Bilingual Education auxiliary teachers, results of basal reader series mastery tests revealed

that 96% of these pupils mastered at least one book level. The median gain for this group also was 2 book levels.

Thus, both the Cariño Center and Auxiliary Teacher components were successful in increasing pupils' reading levels to a greater extent than expected.

Objective 4: Project pupils will develop their mathematics skills to the extent that, in May, 50% of the kindergarten pupils will attain GE scores of at least 0.8; and, between September pretest and May posttest, 60% of the pupils in Grades 1-8 will make a month-for-month gain in GE score, as measured by the KeyMath Diagnostic Arithmetic Test.

This objective was partially attained. The expected proportion of kindergarten pupils achieved the criterion score, but pupils in Grades 1-8 did not achieve the expected gains.

In September and May, the KeyMath Diagnostic Arithmetic test was administered to 96 pupils in Grades 1-8. Fifty-six of these pupils attended the Cariño Center and 40 received Auxiliary Teacher Service. In May, this individually-administered test also was given to 197 kindergarten pupils.

Of the 96 elementary-grade pupils, only 41 (43%) gained at least the expected 0.8 points in GE score between the September and May administrations of the KeyMath Diagnostic Arithmetic Test.

Of the 197 kindergarten pupils tested in May, 53% attained or exceeded the criterion score (0.8).

SUMMARY AND CONCLUSIONS

The project was fully implemented. Six ESL-R centers provided instruction in English-language and readiness skills. The Cariño Center offered full-day instruction for pupils with limited English-speaking ability. In five schools auxiliary teachers provided remedial help to pupils of Spanish origin.

Two project objectives were attained and two were partially attained. The ESL-R component was especially successful in having Spanish-dominant pupils (Category 1 on the James Language Dominance Test) increase their facility with English. This component also experienced success in having its pupils attain anticipated levels of mathematics achievement and letter/sound recognition. It was somewhat less successful in the area of aural comprehension. The pupils' mean score on this subtest was less than one point below the criterion.

The Cariño Center and Auxiliary Teacher component pupils exceeded expected gains in reading. They did not achieve anticipated gains in mathematics.

TABLE 1

PROPORTIONS OF BILINGUAL EDUCATION PUPILS CLASSIFIED IN EACH OF 5 LANGUAGES DOMINANCE CATEGORIES ON THE SEPTEMBER AND MAY ADMINISTRATIONS OF THE JAMES LANGUAGE DOMINANCE TEST, 1977-1978.

CATEGORIES	PRETEST		POSTTEST	
5 (English Dominant	38	(24%)	43	(27%)
4	3	(2%)	14	(9%)
3	33	(21%)	90	(56%)
2	9	(5%)	5	(3%)
1 (Spanish Dominant)	77	(48%)	8	(5%)
TOTAL	160	(100%)	160	(100%)

TABLE 2

NUMBER OF BILINGUAL EDUCATION KINDERGARTEN PUPILS SCORING IN SPECIFIED RANGES ON SELECTED SUBTESTS OF THE SESAT, SPRING 1978

RAW SCORE RANGES	LETTERS AND SOUNDS		AURAL COMPREHENSION	
22-28	92	(46%)	46	(23%)
15-21	69	(34%)	95*	(47%)
8-14	30	(15%)	49	(24%)
1-7	10	(5%)	11	(6%)
TOTAL	201	(100%)	201	(100%)

* Interval containing the mean score

PROJECT BRIDGE

Project Bridge is designed as a Grade 2-4 program, providing an extension of the comprehensive services and benefits associated with Follow Through-type programs to 18 schools that had not been able to participate in these earlier programs. In addition, it introduces a special emphasis on concept learning and comprehension at these key elementary grade levels.

RATIONALE

Schools selected for inclusion in Project Bridge are those Title I eligible sites without a major K-3 program and a very large percentage of third grade pupils scoring below the 50th percentile in Total Reading on the California Achievement Test (CAT). Performance of this nature at the third grade level indicates a need for the special kind of small group/individualized instruction and consistency of approach that is characteristic of Follow Through programs. The downward trend in performance on standardized tests which is regularly evident in large cities, particularly beginning with third grade, is also one of the reasons for establishing Project Bridge, which is meant to counteract this decline with a unique combination of Follow Through elements and special emphasis on conceptual and comprehension skills.

EXPECTED OUTCOMES

Project Bridge operates with (1) multi-adult classrooms, (2) instructional techniques and curricula that are concept-oriented and represent the best of Follow Through and District Reading and Mathematics programs, and (3) other major components of the Follow Through Program, i.e., parent involvement, staff development, and, as funding allows, special supportive services. This kind of program is expected to result in improved performance in reading and mathematics during the program years and gradually to produce a long-term, positive effect on post-program performance.

PREVIOUS FINDINGS

There were no previous findings because this was the first year of this project.

EVALUATION OF THE CURRENT YEAR

All evaluation activities were tied to the comprehensive documenting design that has been consistently employed with all Follow Through programs in Philadelphia. There was provision, therefore, for (1) regularly conducting classroom observations, (2) analyzing achievement both from a cross-sectional and longitudinal perspective, and (3) documenting the major indicators of parent involvement, staff development, and types of special supportive services. During this initial year of operation, however, there were also specially developed

questionnaires employed to provide timely, accurate information on the effectiveness of staff training and on staff attitudes toward the program during the course of the year.

IMPLEMENTATION

The project's intended mode of operation overall was partially implemented in 1977-1978.

This new program, designed to foster concept learning skills in Grades 2-4 through use of the most successful elements of Follow Through, was introduced in 1977-1978 into 18 Title I eligible schools which had had no previous relationship with Follow Through-type programs. During its first year it served approximately 3800 students. Full scale program operations were able to be instituted only during the second half of the school year.

Implementation data were obtained from District Liaison Assistants' (DLAs) and Training Coordinators' monthly reports, and classroom observation data using the Follow Through Classroom Observation Routine (COR). The COR is a locally developed instrument that has been consistently used in Follow Through-related programs since 1974-1975 and yields information on instructional approach, staffing and pupil grouping patterns, instructional media and cognitive and non-cognitive strategies used in instruction. During Spring, full-time evaluation staff and three experienced, hired observers conducted one round of observation in each program class. It should be noted that the observation data constitute initial, baseline information on this new program, which was able to get fully underway only during the second half of the school year; the findings therefore are to be regarded with caution.

Initial staff orientation sessions for Project Bridge were conducted in October and November; 176 teachers and classroom aides participated in three days of intensive training. Pre-post questionnaire data indicated that the objectives of the training sessions were met and that positive attitudes toward the program prevailed among site staff.

The program officially became operational in December, but it was well into the second half of the school year before all three Training Coordinators could be appointed and the total number of aides assigned. The 18 principals were generally very supportive of the program and implementation gradually developed along expected lines during the course of the year, as required materials began to arrive and staff development was introduced on a consistent basis both in terms of individual and group sessions.

There were still some problems with the utilization of aides at some sites at the end of the year, but in the majority of cases teachers and aides had begun to plan effective strategies cooperatively for individualizing instruction and establishing learning centers, both key characteristics of the program. A particular problem at some sites is the recommended move toward more homogeneous

grouping of Title I eligible children within classes to facilitate consistent planning and use of the aides; there is still some resistance to this recommendation in a few sites.

COR data show the following: whole class instruction was observed 57% of the time, and large group 19%, while small-group instruction was seen only 21% of the time and individual instruction 3%. Aides were observed assisting children 50% of the time. There were twice as many instances of cognitive approving moves as disapproving but still a noticeable incidence of the latter, an average of more than two per observation. Specific praise was observed about twice per observation and encouragement of student expression of need slightly more than once per observation. As indicated above, given the newness and late start of the program, it seems best to simply note what occurred during the observations without pressing for implications, though in general the data seem to point toward the conclusion that the program was not fully stabilized around its intended mode of operation.

In the parent involvement domain, it was late in the year when the program was able to move toward more organized efforts at recruiting volunteers and developing teacher management strategies for handling a three-adult-classroom effectively. The use of parent scholars was going to be a key element in Project Bridge but this was unable to be accomplished this first year.

The schools primarily utilize regular School District medical and dental services and are concentrating special supportive services funding on mental health; a number of schools were able to contract for these services in the latter part of the year, as well as for medical and dental services.

ATTAINMENT OF OBJECTIVES

The first two objectives below required analysis of percentages of Second and Third Grade pupils scoring below the 50th percentile in Total Reading and Total Mathematics on city wide tests administered in February 1977 as compared with February, 1978. City-wide testing uses the California Achievement Test (CAT) for Grades 1-12.

The third objective called for information derived from an annual recording form developed by the evaluation unit regarding all major aspects of parent involvement at each program site.

Objective 1. In at least half of the program schools there will be a smaller percentage of second grade pupils scoring below the 50th percentile in Total Reading and Total Mathematics on the California Achievement Test (CAT) administered in February, 1978 than was the case for the total second grade group in these same schools in February, 1977.

This objective was partially attained. Nine of the 18 schools would have to meet the criterion in each of the two areas for complete attainment. While only 7 schools had lower percentages in reading, 13 met the criterion in mathematics,

thus providing partial attainment.

In Reading in 1977 the 18 schools showed a range of 18-70% below the 50th %ile. In 1978 the range was 23-87%. The seven schools that met the criterion had 23-64%. Of all 18 schools, three had 23-37%; five had 40-48%; two had 54 and 57% respectively; five had 60-64%; and three had 79-87%.

In Mathematics in 1977 the schools showed a range of 17-68% below the 50th %ile. In 1978 the range was 29-74%. The thirteen schools meeting the criterion had 29-59%. Of all 18, two had 29 and 34% respectively; seven had 40-48%; five had 52-59%; two had 62 and 68% respectively; and two, 74%.

Objective 2. In at least half of the program schools, third grade pupils in Total Reading and Total Mathematics on the CAT administered in February 1978 will have a small percentage scoring below the 50th percentile than the total third grade group in these same schools in February, 1977.

This objective was not attained. Nine schools in each area would have to meet the criterion for attainment; only 8 schools showed lower percentages in reading and only 6 in mathematics.

Third Grade pupils in these 18 schools in Reading in 1977 showed a range of 34-94% below the 50th percentile. In 1978 the range in this area was 36-95%. The eight schools meeting the criterion had a range of 36-84%. Across the 18 schools the ranges were as follows: two schools had 36 and 37% respectively; three had 53-59%; three had 62-69%; five had 70-78%; two had 80 and 84% respectively; and three had 90-95%.

In Mathematics in 1977 Third Grade pupils had 29-95% below the 50th %ile. In 1978 the range was 48-80%. The six schools which met the criterion were in the 48-72% range. Of all 18 schools, two had 48 and 49% respectively; six had 50-59%; six had 63-68%; two had 71 and 72% respectively; and two had 80%.

Objective 3. In at least half of the program schools there will be at least one hour of parent volunteer time monthly to match the number of children in the program in these schools.

This objective was not attained. Only 3 schools met the criterion, whereas 9 would have to meet it for complete attainment.

Across the 18 schools the number of volunteer hours ranged from 0 to 3992. The three schools which met the criterion were in the 704-3992 range. Two schools had 969 and 3992 hours respectively; four had 565-792; three had 213-465; three had 123-190; the remaining six had less than 100 hours.

SUMMARY AND CONCLUSIONS

This is a new program in Grades 2-4 with primary stress on developing concept-learning and higher order skills through selective introduction of the most successful elements of Follow Through. It was December before the program could be officially initiated and well into the second half of the year before Training Coordinators could be appointed and aides assigned. Under the circumstances implementation as intended could only be partially attained.

In the instructional area only one of the two objectives was partially attained. There was a smaller percentage of second grade pupils scoring below the 50th percentile in Mathematics this year than previously in more than the required number of schools, but this was not the case in Reading. A similar objective for Third Grade was not attained.

A third objective regarding parent volunteer hours was also not attained. The whole parent involvement area was unable to be given the intended attention this first year. The use of Parent Scholars in the instructional process was also unable to be arranged this year.

In the supportive services area the schools relied on the School District for medical and dental services and concentrated on contracted services primarily for mental health support.

This first year of operation had substantial, and in many ways unavoidable, implementation problems. Implementation consistently improved, however, over the course of the year. Two particular problem areas were the late assignment of personnel and the effective utilization of aides. These appeared to be particulary crucial and in many ways related to the lack of attainment in two of the three objectives.

COMPREHENSIVE MATHEMATICS "A": ELEMENTARY MATHEMATICS RESOURCE TEACHER

The Elementary Mathematics Resource Teacher (EMRT) project is designed to improve the computational skills of Title-I-eligible pupils in Grades 1-8.

RATIONALE

The pupils for whom the EMRT project was designed have repeatedly exhibited a deficiency in mathematics as indicated by teacher assessment and by their scores on the California Achievement Tests. The project was created to reduce the skill deficiencies of these pupils by providing a mathematics resource teacher to work with the eligible pupils and teachers of each Title I school. The EMRTs stress the importance of basic mathematical skills, suggest and demonstrate methods of teaching mathematics, delineate what should be taught and in what sequence, and provide instruments for assessing pupil progress.

In some schools, part-time classroom aides were also assigned to supplement the work of the EMRTs and classroom teachers. They are able to provide individualized or small group assistance to pupils and by assuming some of the teachers' non-instructional tasks, increase the amount of time teachers are able to devote to actual instruction, diagnosing learning problems, developing and implementing instructional strategies, and evaluating pupil progress.

EXPECTED OUTCOMES

The project is designed to improve the mathematical skills of participating Title-I-eligible pupils. Since many Title I children have been known to have poor attendance records, it is expected that those who attend regularly will show greater achievement than those who are poor attenders. Through the implementation of the project, there should be a reduction in the percentage of pupils obtaining Total Mathematics scores below the 16th percentile on the California Achievement Tests. Pupils also should show gains in their instructional levels on the Philadelphia Mathematics Evaluation Test.

PREVIOUS FINDINGS

During the project's initial year (1972-1973), a mathematics specialist was assigned to each of the participating schools. As a result of needs recognized during the initial year, emphasis in the 1973-1974 school year was placed on individualization of instruction and continual diagnosis and evaluation of pupil progress. Although the project was generally successful in improving pupils' mathematical skills, the specific objectives were found to be unrealistically high. The 1974-1975 objective of a median growth of two instructional levels was attained.

Each year since 1975, pupils have continued to improve their scores on the Mathematics subtest of the California Achievement Tests and achieve

the project goal of a growth of two instructional levels on the Philadelphia Mathematics Evaluation Test. On both measures of mathematical skills, pupil achievement has been directly related to regular attendance at remediation sessions.

In September 1977, the Elementary Mathematics Classroom Aides project became part of the Elementary Mathematics Resource Teacher project. During 1976-1977, the aides used an average of 78% of their time working with individuals or small groups of pupils, and an average of 16% of the time performing clerical work, performing housekeeping tasks, preparing and maintaining instructional materials, and planning activities with teachers. The remaining 6% of the time was spent on other activities.

EVALUATION OF THE CURRENT YEAR

As in previous years, the current year's evaluation of the Elementary Mathematics Resource Teacher (EMRT) project focused on the project's progress toward improving the mathematical skills of participating Title-I-eligible pupils. Project records of individual pupils, observations, and interviews with project teachers and aides were used to determine the level of project implementation. Pretest and posttest scores on the Philadelphia Mathematics Evaluation Test and the California Achievement Tests were used to measure pupil achievement. The Weekly Summary of Activities Log was used to document aide services.

IMPLEMENTATION

During the 1977-1978 school year, the Elementary Mathematics Resource Teacher (EMRT) project was fully implemented as planned. The Division of Mathematics Education provided 14 hours of staff development to the EMRTs at district locations and the Durham Center, and 12 hours of staff development to the Elementary Mathematics Classroom Aides at the Stevens School. The EMRTs learned about affective teaching techniques, the calculator, and motivational activities for computational skill development from the staffs of the Division of Mathematics Education, Affective Education, and the Durham Center. A workshop at the Durham Center provided EMRTs with the opportunity to make instructional materials. The aides worked with calculators and learned techniques and activities for computational skill development from district collaborators and a mathematics supervisor.

Project records indicated that 110 EMRTs provided remediation services to approximately 8,100 Title-I-eligible pupils in Grades 1-8. They also served approximately 2,800 pupils through demonstration lessons, and individual assistance, or group instruction, in the classroom during mathematics lessons. In 38 schools, Elementary Mathematics Classroom Aides worked with Title-I-eligible pupils under the direction of an EMRT or a classroom teacher. They also assisted with non-instructional tasks, enabling EMRTs and teachers to devote more instructional time to pupils.

Using the Observational Checklist, the evaluator interviewed 21 EMRTs and observed each of them teaching a remediation lesson. Because of scheduling problems and individual school needs, the EMRTs scheduled their services in various ways. Teachers reported using an average of 52% (7.5-15.75 hours each week) of their time for remediation, 36% (.75-12.75 hours each week) for staff development, and 12% (1-6.75 hours each week) for evaluating and monitoring pupil progress and preparing instructional materials.

Pupils selected for remediation service by these 21 EMRTs scored between the 1st and 42nd percentiles on the mathematics subtest of the California Achievement Tests (CAT) in 1977. Grouping of pupils for remediation was generally based on grade, Philadelphia Mathematics Evaluation Test (Levels) results, and availability of time in pupils' schedules. In addition to their regular five periods of mathematics instruction, each pupil received 1.5-3.75 hours of remediation each week. In 17 schools, EMRTs provided remediation to five groups of pupils; in three schools, to six groups of pupils; and in one school, to seven groups of pupils.

EMRTs met with pupils for 45 minutes two to five times each week, 30 minutes three times a week, or combinations of 30- to 45-minute sessions. Remediation was not provided when pupils were scheduled for mathematics, English, or reading. All 21 EMRTs emphasized basic mathematics skills development in their remediation lessons. Seventeen EMRTs followed the Levels program.

Observations during remediation lessons showed that instruction generally focused on drill and reinforcement of number facts through the use of such materials as games, learning kits, worksheets, workbooks, hands-on activities, paper-and-pencil activities, filmstrips, and listening activities. In 16 of the 21 classes observed, the EMRTs instructed all pupils in the same activity with up to four changes in presentation during a class period. Small-group instruction was observed in two classes with two changes in presentation. Individualized instruction was observed in three classes. Remediation class enrollment ranged from 13-17 pupils. Attendance ranged from 8-17 pupils and averaged 82%.

EMRTs reported that they had provided (a) staff development in their schools with up to 13 demonstration lessons each week in the classroom, (b) assistance to individuals in classrooms, (c) presentations at faculty meetings, (d) conferences with principals, teachers, and parents, and (e) workshops for teachers and parents.

In working with teachers in their schools, EMRTs reported assisting teachers in the use of the "levels" approach and the integration of mathematics with subjects such as reading, science, language arts, social studies, art, music, and gym. EMRTs also helped teachers to improve their mathematics teaching skills by demonstrating methods, techniques, and activities. In some cases, these activities coincided with ongoing lessons, and in other cases, they were used to improve pupils' common weaknesses. In schools with new teachers, additional assistance was

provided with lesson planning, record keeping, and group and classroom management techniques.

Using the Observational Checklist, the evaluator interviewed and observed 14 of the 38 Elementary Mathematics Classroom Aides. Of the aides interviewed, 13 reported they had spent at least 75% of their 15-hour week working with individuals or small groups of pupils; one reported spending 50% of her time with pupils. Aides were observed assisting pupils with number facts, rounding off of numbers, number sequence, and long division. They were also observed marking papers, preparing instructional materials, and performing housekeeping tasks.

ATTAINMENT OF OBJECTIVES

Objective 1: Participating pupils in Grades 2-8 will improve their mathematics skills to the extent that they will demonstrate on the numeration, whole numbers, and fractional numbers sections of the Philadelphia Mathematics Evaluation Test an average gain of two instructional levels during the 10-month school year.

The objective was fully attained.

Pupils selected by EMRTs for remediation sessions were administered the numeration, whole numbers, and fractional numbers sections of the Philadelphia Mathematics Evaluation Test (Levels) in October 1977 and April 1978. Attendance data at remediation sessions were collected until April 28 for participating pupils to determine the effect of attendance on pupil achievement. The number of remediation sessions offered twice a week ranged from 23-68 sessions; the number of remediation sessions offered three times a week ranged from 30-100 sessions.

The records of 8,125 pupils from 107 schools in Grades 1-8 selected for remediation sessions were examined. Data from 2,317 pupils could not be utilized because of transfers to other schools or missing test results. The 5,808 pupils for whom attendance and tests results were available demonstrated a mean gain of 1.6 instructional levels during the 6-month period between pretest and posttest. The projected gain for a 10-month school year was 2.7 instructional levels. The expected gain was greatly exceeded.

As shown in Table 1, pupil achievement did not vary greatly among grade levels. Those who attended their remediation sessions regularly demonstrated a greater gain than those who did not attend regularly ($t=9.44$, $df=5,806$, $p<.05$). The 4,839 pupils who attended at least 75% of their remediation sessions demonstrated a mean gain of 1.6 instructional levels in six months (projected gain of 2.7 levels). The 969 pupils who attended less than 75% of their remediation sessions demonstrated a mean gain of 1.3 levels in the same period (projected gain of 2.2 levels).

In general, pupils attained the expected gains in levels on the Philadelphia Mathematics Evaluation Test. Those who attended remediation sessions regularly demonstrated more progress than those who did not attend regularly.

Objective 2: Participating pupils in Grades 2-8 will improve their mathematics skills to the extent that between February 1977 and February 1978, the percentage of pupils obtaining Total Mathematics scores below the 16th percentile on the California Achievement Tests will be significantly ($p<.05$) reduced.

The objective was fully attained.

The Mathematics subtest of the California Achievement Tests was administered to pupils in 109 Title I schools in February 1978. The records of the 5,808 pupils in Grades 1-8 selected to determine the attainment of Objective 1 were also analyzed for this objective. In 1977, 4,830 of these pupils had scored below the 16th percentile and 978 pupils had scored between the 16th and 49th percentiles. The records of an additional 1,583 pupils who had not been invited to remediation sessions, but who had scored below the 16th percentile in 1977, were also analyzed.

Performance of Pupils Who Had Scored Below the 16th Percentile

In 1978, 40% of the pupils who had scored below the 16th percentile in 1977 and who had received remediation scored at or above the 16th percentile. As shown in Table 2, 4,009 of the 4,830 pupils attended at least 75% of their remediation sessions. In 1978, the number of regularly attending pupils scoring below the 16th percentile was reduced by 42%. The 821 pupils who attended less than 75% of their remediation sessions demonstrated a reduction in number by 33%. Among the 1,583 pupils who were not invited to remediation sessions, the reduction was 31%. For each of these three groups, the percentage of pupils scoring below the 16th percentile was significantly ($p<.05$) reduced. The largest reduction was shown by the second graders.

Further analysis showed that attendance and frequency of the remediation sessons were related to pupil achievement. A greater reduction in the percentage of pupils scoring below the 16th percentile occurred among pupils who attended their remediation sessions regularly than among pupils who did not attend their remediation sessions regularly ($\chi^2=20.96$, $p<.05$) or those not invited to remediation sessions ($\chi^2=58.23$, $p<.05$). The progress of those who did not attend regularly did not differ significantly from those pupils not invited to remediation sessions ($\chi^2=1.49$, $p<.05$). Title-I-eligible pupils who were not invited to remediation sessions may have received other types of service to help them overcome their deficiencies.

Of the 4,009 pupils who had scored below the 16th percentile and who had attended regularly, 360 were offered remediation service twice a week and 3,649 were offered remediation service three times a week. Pupils offered remediation three times a week demonstrated a greater reduction (42%) in percentage of pupils scoring below the 16th percentile than pupils offered remediation only twice a

week (37%). The difference between these percentages was significant (χ^2_1=4.17, p<.05). However, length of remediation session -- 30-, 40-, 45-minutes or other duration -- did not impact on pupil achievement (χ^2_3 =5.76, p>.05). Among pupils who did not attend regularly, no significant difference was found (χ^2_1=.045, p>.05) between the two frequency-of-remediation groups.

The 81 pupils offered remediation twice a week demonstrated a 32% reduction in the number of pupils scoring below the 16th percentile. The 740 pupils offered remediation three times a week showed a 33% reduction.

Performance of Pupils Who Had Scored Above the 16th Percentile

In 1978, 58% of the 978 pupils, who had scored between the 16th and 49th percentiles in 1977 and had received remediation service, maintained or exceeded their previous percentile ranks. As shown in Table 3, 830 of the 978 pupils attended at least 75% of their remediation sessions, and 148 pupils attended less regularly. The percentage (59%) for pupils who attended their remediation sessions regularly did not differ significantly (χ^2=1.18, p>.05) from the percentage (54%) for pupils who attended less regularly. The second graders showed the most continued progress.

Of the 830 pupils who had attended regularly, 112 were offered remediation twice a week and 718 were offered remediation three times a week. A larger percentage of pupils offered remediation three times a week were able to maintain or exceed their 1977 percentile ranks (61%) than pupils offered remediation twice a week (46%). Like the pupils who had scored below the 16th percentile who had attended regularly, the difference between these percentages was significantly different (χ^2_1=9.71, p<.05).

Frequency of remediation service had no influence on the pupils who attended less regularly (χ^2=0, p>.05). For both pupils who were offered remediation twice a week and those offered remediation three times a week, 54% maintained or exceeded their 1977 percentile ranks.

In general, pupils made significant improvement in their scores on the Mathematics subtest of the California Achievement Tests. Pupils who had scored below the 16th percentile in 1977 and who had attended their remediation sessions regularly showed more progress than those who did not. Among the regularly attending pupils, those who attended remediation sessions three times a week improved or maintained their progress more than those attending twice a week.

Objective 3: The Elementary Mathematics Classroom Aides will assist the Elementary Mathematics Resource Teachers by working at least 75% of the time with individuals or small groups of pupils in the Mathematics Center or the classroom during a mathematics lesson, and not more than 25% of the time performing clerical work, performing housekeeping tasks, and/or preparing and maintaining instructional materials. These activities will be verified by the evaluator's examination

of the aides' Weekly Summary of Activities Log and observations made with the Observational Checklist.

The objective was fully attained.

Using the Observational Checklist, the evaluator interviewed and observed 14 of the 38 Elementary Mathematics Classroom Aides. Of the 14 aides, 11 were observed working with individuals or small groups of pupils. Seven aides worked with pupils with the EMRT during a remediation lesson; four worked with their own groups of pupils under the direction of an EMRT or a classroom teacher. Aides were also observed performing clerical work, performing housekeeping tasks, and preparing and maintaining instructional materials.

Aides completed Weekly Summary of Activities Logs for the weeks of October 24-28, 1977, January 30-February 3, 1978, and April 24-28, 1978. Complete logs were obtained from 37 aides in October, 33 aides in January, and 36 aides in April.

Overall, the aides spent an average of 80% of their time working with pupils in Grades 1-8. As shown in Table 4, the aides reported a slight increase in the time spent working with pupils between October and April. Aides tended to work more often under the direction of an EMRT than under the direction of a classroom teacher.

Overall, an average of 20% of the aides' time was used for providing non-instructional assistance to the EMRTs or classroom teachers. In providing this assistance, 4% of the time was spent performing such clerical work as record keeping, marking of papers, and recording attendance; 1% of the time for housekeeping tasks such as cleaning up and straightening, packing, and shelving of materials; 5% of the time for preparing and maintaining instructional materials; 4% of the time for planning pupil activities with the EMRT or teacher; and 6% of the time on other activities.

In general, the Elementary Mathematics Classroom Aides were successful in providing assistance to Title-I-eligible pupils under the direction of an EMRT or a classroom teacher. They also provided non-instructional assistance to the EMRT or teacher by performing clerical work and housekeeping tasks and preparing and maintaining instructional materials.

SUMMARY AND CONCLUSIONS

The Elementary Mathematics Resource Teacher (EMRT) project was established to improve the basic mathematical skills of Title-I-eligible pupils in Grades 1-8 and to provide a resource teacher to work with the teachers of these pupils. The EMRTs provided remediation to selected Title-I-eligible pupils; provided staff and curriculum development for classroom teachers, principals, and parents; and monitored and evaluated pupil progress. The project also provided

Elementary Mathematics Classroom Aides to work with pupils and provided non-instructional assistance to the EMRTs and classroom teachers.

The project was implemented in 109 Title I elementary schools and was successful in improving the mathematical skills of Title-I-eligible pupils in Grades 1-8 who had obtained CAT Total Mathematics scores below the 50th percentile in 1977. In the six-month period between pretest and posttest, pupils who attended at least 75% of their remediation sessions demonstrated a mean gain of 1.6 instructional levels on the numeration, whole numbers, and fractional numbers section of the Philadelphia Mathematics Evaluation Test (Levels). Those who attended less than 75% of their remediation sessions demonstrated a mean gain of 1.3 instructional levels.

Regular attendance at remediation sessions had a positive impact on the achievement of pupils who had scored below the 16th percentile on the CAT in 1977. In 1978, 42% of the 4,009 pupils who had attended their remediation sessions regularly scored at or above the 16th percentile. Of the 821 pupils who had not attended regularly, 33% scored at or above the 16th percentile. Of the 1,583 pupils who had not been selected for remediation, 31% achieved the criterion.

Regular attendance did not have a significant effect on pupils who had scored between the 16th and 49th percentiles in 1977. In 1978, 59% of 830 regularly attending pupils maintained or exceeded their 1977 percentile ranks and 54% of the 148 pupils who attended less regularly maintained or exceeded their previous ranks.

Regularly attending pupils offered remediation sessions three times a week were better able to maintain or exceed their previous percentile ranks than those offered remediation twice a week.

TABLE 1

GAIN IN INSTRUCTIONAL LEVEL* BY PUPILS IN COMPREHENSIVE MATHEMATICS "A" BETWEEN OCTOBER 1977 AND APRIL 1978

	Pupils Who Attended At Least 75% of Remediation Sessions		Pupils Who Attended Less Than 75% of Remediation Sessions	
Grade	No. of Pupils	Mean Level Gained	No. of Pupils	Mean Level Gained
1	7	1.4	2	1.0
2	560	1.6	115	1.3
3	670	1.6	143	1.4
4	952	1.5	191	1.2
5	1423	1.7	248	1.3
6	1028	1.8	189	1.2
7	130	1.4	51	1.7
8	69	1.5	30	1.8
Total	4839	1.6**	969	1.3**

*Based on Philadelphia Mathematics Evaluation Test
**t=9.44, df = 5,806, p<.05

TABLE 2

IMPROVEMENT IN PERCENTILE RANK ON CAT MATHEMATICS SUBTEST BY PUPILS IN COMPREHENSIVE MATHEMATICS "A" WHO HAD SCORED BELOW THE 16TH%ILE IN 1977

	Pupils Who Attended At Least 75% of Remediation Sessions		Pupils Who Attended Less Than 75% of Remediation Sessions		Pupils Not Invited To Remediation Sessions	
	Scoring		Scoring		Scoring	
Grade	Below 16th%ile in 1977	At or above 16th%ile in 1978	Below 16th%ile in 1977	At or above 16th%ile in 1978	Below 16th%ile in 1977	At or above 16th%ile in 1978
1	5	5(100%)	2	2(100%)	----	----
2	413	291 (70%)	88	55 (62%)	174	95 (55%)
3	517	238 (46%)	108	40 (37%)	169	56 (33%)
4	755	238 (32%)	161	33 (20%)	226	57 (25%)
5	1273	544 (43%)	216	72 (33%)	487	163 (33%)
6	875	300 (34%)	173	43 (25%)	431	84 (19%)
7	111	29 (26%)	43	11 (26%)	59	24 (41%)
8	60	23 (38%)	30	15 (50%)	37	5 (14%)
TOTAL	4009	1668(42%)[a]	821	271 (33%)[b]	1583	484 (31%)[c]

[a] $z=53.78$, $p<.05$

[b] $z=20.12$, $p<.05$

[c] $z=26.68$, $p<.05$

TABLE 3

IMPROVEMENT IN PERCENTILE RANK ON CAT MATHEMATICS SUBTEST BY PUPILS IN COMPREHENSIVE MATHEMATICS "A" WHO HAD SCORED AT OR ABOVE THE 16TH%ILE IN 1977

	Pupils Who Attended At Least 75% of Remediation Sessions			Pupils Who Attended Less Than 75% of Remediation Sessions		
Grade	Scoring at or above 16th%ile in 1977	Maintaining or Exceeding %ile rank in 1978		Scoring at or above 16th%ile in 1977	Maintaining or Exceeding %ile rank in 1978	
1	2	2	(100%)	--	----	
2	147	105	(71%)	27	17	(63%)
3	153	88	(58%)	35	19	(54%)
4	197	86	(44%)	30	15	(50%)
5	150	95	(63%)	32	18	(56%)
6	153	96	(63%)	16	5	(31%)
7	19	12	(63%)	8	6	(75%)
8	9	6	(67%)	--	----	
TOTAL	830	490	(59%)*	148	80	(54%)*

*$\chi^2=1.18$, $p>.05$

TABLE 4

ELEMENTARY MATHEMATICS CLASSROOM AIDES SUMMARY OF ACTIVITIES

Activity	Average Minutes Worked During Sample Week						Overall Average Minutes Worked	
	October (N=37)		January (N=33)		April (N=36)			
1. Work with pupils under:								
supervision of EMRT	418	(50%)	451	(52%)	434	(49%)	434	(50%)
supervision of classroom teacher	241	(28%)	250	(28%)	277	(32%)	256	(30%)
TOTAL	659	(78%)	701	(80%)	711	(81%)	690	(80%)
2. Noninstructional tasks:								
Clerical Work	52	(6%)	31	(4%)	34	(4%)	39	(4%)
Housekeeping Tasks	11	(1%)	13	(1%)	13	(1%)	12	(1%)
Prepare/Maintain Instructional Materials	42	(4%)	41	(5)	35	(4%)	40	(5%)
Plan Activities	35	(4%)	37	(4%)	31	(4%)	34	(4%)
Other	50	(6%)	52	(6%)	52	(6%)	51	(6%)
TOTAL	190	(22%)	174	(20%)	165	(19%)	176	(20%)
TOTAL MINUTES	849	(100%)	875	(100%)	876	(100%)	866	(100%)

COMPREHENSIVE MATHEMATICS "B": JUNIOR HIGH/MIDDLE SCHOOL MATHEMATICS SPECIALIST

The Junior High/Middle School Mathematics Specialist project is designed to improve the computational skills of Title-I-eligible pupils in Grades 7-9.

RATIONALE

Pupils attending Title I junior high and middle schools have consistently shown a deficiency in basic mathematical skills similar to those exhibited by Title I elementary school pupils. To improve the skills of these pupils, a program which extends the emphasis and content of the elementary school program was considered essential. The Junior High/Middle School Mathematics Specialist project was designed to remediate pupil deficiencies in basic mathematical skills and to provide a resource to help the teachers of Title I pupils improve their instructional skills in basic mathematics.

EXPECTED OUTCOMES

Participating Title-I-eligible pupils should be able to improve their computational skills in mathematics. Pupils with regular attendance in the tutorial sessions and regular classes should be able to show greater achievement than those with low attendance. The regular classroom teachers of these children also should become more knowledgeable of instructional techniques, materials, and activities which could be used for basic mathematics instruction.

PREVIOUS FINDINGS

Since 1975-1976, the project has been implemented in all Title I junior high and middle schools. During 1975-1976, pupils who had attended their mathematics classes regularly were successful in improving their computational skills. They met the project's goal of a gain of two instructional levels on the Philadelphia Mathematics Evaluation Test (Survey Form A). Pupils who had attended less regularly did not achieve this goal. No explanation was found for a lack of relationship between attendance at remediation sessions and gains in achievement level.

During 1976-1977, pupil achievement was related to regular attendance at both remediation sessions and mathematics classes. On the Mathematics Computation section of the California Achievement Tests, 29% of the regular attenders of both remediation sessions and mathematics classes scored at or above the 16th percentile. Among pupils who attended their remediation sessions regularly but not their mathematics classes, 25% showed improvement while among those who attended their mathematics classes regularly but not their remediation sessions, 19% showed improvement. The smallest improvement, 12%, was demonstrated by those who attended neither remediation sessions nor mathematics classes regularly.

EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the Junior High/Middle School Mathematics Specialist project focused on program implementation and pupils' computational skill improvement. Project records, interviews, and observations of the specialists were used to assess program implementation. Staff development sessions were also observed by evaluators. Pretest and posttest scores on the California Achievement Tests were used to determine project pupils' achievement.

IMPLEMENTATION

During 1977-1978, the project's intended mode of operation was fully implemented in 23 Title I junior high and middle schools. The Division of Mathematics Education provided the mathematics specialists with seven two-hour staff development sessions at the Durham Center and at selected project schools. The project director, the staff of the Durham Center, and the specialists shared and discussed teaching techniques and activities for classroom use. Topics included metric measurement, the calculator, chip trading and fractions, low-stress algorithms for addition, subtraction, and multiplication and motivational activities for computational skill development. A hands-on workshop at the Durham Center provided the specialists with an opportunity to make games and other instructional materials.

Twenty of the 23 mathematics specialists submitted a weekly activity schedule in October. They had allotted 16 periods (57%) of their time for remediation, 8-9 periods (29-32%) for staff development, and 3-4 periods (11-14%) for diagnosing pupil problems and prescribing programs of instruction.

At the beginning of the school year, the number of Title-I-eligible pupils selected by the specialists for remediation service ranged from 107 to 120. The mathematics specialists selected their pupils from those rostered to the Title I reading classes. In 19 schools, pupils were released from two of their five Title I reading classes; in four schools, they were released from classes other than mathematics or reading.

Using the Observational Checklist, the evaluator interviewed and observed 12 mathematics specialists teaching remediation lessons. The specialists offered remediation to eight groups of pupils for two 40-45 minute periods each week. These sessions were provided in addition to five periods of regular mathematics instruction. Selection and grouping of pupils was generally based on grade and availability of time in pupils' schedules. These pupils had scored between the 1st and 25th percentiles on the Computation section of the California Achievement Tests (CAT) in 1977. All 12 mathematics specialists reported emphasizing basic mathematics skill development in their remediation lessons. Three specialists also reported emphasizing the Levels program with the seventh graders.

Observations during remediation sessions showed that instruction focused on work with number facts and computational skill development through the use of games, workbooks, worksheets, paper-and-pencil activities, hands-on activities,

and listening activities. In nine of the 12 classes observed, the specialists instructed all pupils in the same activitiy with up to four changes in presentation during a class period; instruction was individualized in the remaining three classes. Remediation class size ranged from 10 to 15 pupils. Although specialists had taken steps to improve attendance, scheduling conflicts and cutting of classes by pupils affected attendance rates. Average attendance was 68% of those invited to attend.

The specialists reported that they had helped other Title-I-eligible pupils by providing individual assistance or group instruction in the regular classroom during mathematics lessons. They had provided staff development through presentations at departmental meetings, conferences with principals, teachers, and parents and workshops for teachers, parents and aides. The number of demonstration lessons in the classrooms varied from nine a week to one a month. In ten schools, the specialists assisted teachers in implementing the Levels program in the 7th-grade by familiarizing them with the Levels program, helping roster pupils according to their levels, conducting workshops, providing assistance in record keeping, showing how to teach the content of the Levels program, and sharing techniques for providing drill.

In an effort to update the teaching skills of the teachers in their schools, specialists also shared methods, activities, and techniques for developing computational skills. In some cases, these activities coincided with ongoing lessons and in other cases they dealt with common weaknesses of the pupils. In schools with new teachers, additional assistance was provided with lesson planning, record keeping, and classroom management techniques.

ATTAINMENT OF OBJECTIVES

Objective 1: Participating pupils in Grades 7-9 who attended at least 75% of their regular mathematics classes and at least 75% of their remediation sessions will improve their mathematics skills to the extent that between February 1977 and February 1978, the percentage of pupils scoring below the 16th percentile on the Mathematics Computation section of the California Achievement Tests will be significantly ($p<.05$) reduced.

The objective was fully attained. The Mathematics Computation section of the California Achievement Tests (CAT) was administered to pupils in 23 Title I schools in February 1978. Attendance data at remediation sessions and mathematics classes were collected until April 28 for all pupils served to determine the effect of attendance on pupil achievement. The number of remediation sessions offered ranged from 26 to 57 sessions.

When the records of 2,730 pupils in Grades 7-9 were examined, data from 807 pupils could not be utilized because of transfers, drop outs, or missing test results. Remediation service had been provided to 1,575 pupils who had scored below the 16th percentile and 348 pupils who had scored between the 16th and

25th percentiles in 1977. (The achievement of this latter group will be discussed in Objective 2.)

Of the 1,575 pupils who had scored below the 16th percentile, 952 attended at least 75% of their remediation sessions and 75% of their mathematics classes (Table 1). In February 1978, 38% of these regularly attending pupils scored at or above the 16th percentile. This result is a significant ($p<.05$) reduction in number of pupils scoring below the 16th percentile.

Among the 50 pupils who attended at least 75% of their remediation sessions but less than 75% of their mathematics classes, 28% scored at or above the 16th percentile. Among the 317 pupils who attended less than 75% of their remediation sessions but at least 75% of their mathematics classes, the reduction in number of pupils scoring below the 16th percentile was 26%. Among the 256 pupils who attended neither remediation sessions nor their mathematics classes regularly, the reduction was 21%. Each of these percentages represents a significant decrease in the proportion of pupils scoring below the 16th percentile.

As shown in Table 2, the progress demonstrated by those who attended both their remediation sessions and mathematics classes regularly was significantly greater than that of those who attended their mathematics classes regularly but not their remediation sessions regularly ($\chi^2=14.47$, $p<.05$) and those who attended neither mathematics classes nor remediation sessions regularly ($\chi^2=25.71$, $p<.05$).

A significant number of pupils in Comprehensive Mathematics "B" who scored below the 16th percentile on the Mathematics Computation section of the CAT in 1977 scored at or above the 16th percentile in 1978. The most progress was demonstrated by Title-I-eligible pupils who regularly attended their remediation sessions and mathematics classes.

Objective 2. Participating pupils in Grades 7-9 who attended at least 75% of their regular mathematics classes and at least 75% of their remediation sessions will improve their mathematics skills. Between February 1977 and February 1978, 10% of the pupils who scored between the 16th and 25th percentiles on the Mathematics Computation section of the CAT will maintain or exceed their 1977 percentile ranks.

This objective was fully attained. The records of 348 pupils in Grades 7-9 who had scored between the 16th and 25th percentiles on the Mathematics Computation section of the CAT in 1977 were analyzed.

As shown in Table 3, 232 pupils attended at least 75% of their remediation sessions and 75% of their mathematics classes. In 1978, 54% of these pupils maintained or exceeded their 1977 percentile ranks. The expected percentage of 10% was greatly exceeded ($z=16.30$, $p<.05$).

Of the 61 pupils who attended less than 75% of their remediation sessions but at least 75% of their mathematics classes, 49% maintained or exceeded their 1977

percentile ranks. Four of the 11 pupils who attended at least 75% of their remediation sessions but less than 75% of their mathematics classes continued their 1977 progress. Of the 44 pupils who attended neither remediation sessions nor mathematics classes regularly, 30% maintained or exceeded their 1977 percentiles.

Comparison of the percentages indicated an overall difference ($\chi^2=9.52$, $p<.05$) among the attendance groups. As shown in Table 4, a significant difference between pupils who attended neither remediation sessions nor mathematics classes regularly and (a) pupils who attended both remediation sessions and mathematics classes regularly ($\chi^2=8.76$, $p<.05$) and (b) pupils who attended less than 75% of their remediation sessions but at least 75% of their mathematics classes ($\chi^2=4.05$, $p<.05$).

A significant number of pupils in Comprehensive Mathematics "B" who had scored between the 16th and 25th percentiles in 1977 maintained or exceeded their previous percentile ranks. Those who attended remediation sessions and mathematics classes regularly were better able to continue their progress than those who did not attend both regularly.

SUMMARY AND CONCLUSIONS

The Junior High/Middle School Mathematics Specialists project was established to improve the computational skills of Title-I-eligible pupils in Grades 7-9 and to provide a resource to help the teachers to improve their instructional skills. The mathematics specialists scheduled remediation sessions for selected pupils, provided staff development to the mathematics teachers of these pupils, and offered individual assistance to selected pupils.

Comprehensive Mathematics "B" was successful in improving the computataional skills of Title-I-eligible pupils in Grades 7-9. Regular attendance at remediation sessions and mathematics classes had a positive impact on the achievement of pupils on the Mathematics Computation section of the California Achievement Tests. Among pupils who had scored below the 16th percentile, 38% scored at or above the 16th percentile in 1978. Among pupils who had scored between the 16th and 25th percentiles in 1977, 54% maintained or exceeded their previous percentile ranks, greatly exceeding the expected percentage.

TABLE 1

IMPROVEMENT IN PERCENTILE RANK ON CAT COMPUTATION SECTION BY TITLE-I-ELIGIBLE PUPILS IN COMPREHENSIVE MATHEMATICS "B" WHO HAD SCORED BELOW THE 16TH%ILE IN 1977

	Pupils Who Attended At Least 75% of Regular Math Classes		Pupils Who Attended Less Than 75% of Regular Math Classes	
Remediation Sessions Attended	Scoring below 16th%ile in 1977	Scoring at or above 16th%ile in 1978	Scoring below 16th%ile in 1977	Scoring at or above 16th%ile in 1978
75% or more	952	358 (38%)[a]	50	14 (28%)[c]
Less than 75%	317	82 (26%)[b]	256	53 (21%)[d]
TOTAL	1269 (100%)	440 (35%)	306 (100%)	67 (22%)

[a] $z=24.18$, $p<.05$
[b] $z=10.55$, $p<.05$
[c] $z=4.41$, $p<.05$
[d] $z=8.25$, $p<.05$

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TABLE 2

CHI SQUARE VALUES FOR COMPARISONS OF PERCENTAGES OF TITLE-I-ELIGIBLE PUPILS IN COMPREHENSIVE MATHEMATICS "B" SCORING AT OR ABOVE THE 16TH%ILE IN 1978 WHO HAD SCORED BELOW THE 16TH%ILE IN 1977

Pupils who Attended	Pupils who Attended		
	At least 75% of Math Classes/ Less than 75% of Remediation Sessions	Less than 75% of Math Classes/ At least 75% of Remediation Sessions	Less than 75% of Math Classes/ Less than 75% of Remediation Sessions
At least 75% of Math Classes/ At least 75% of Remediation Sessions	14.47*	1.91	25.71*
At least 75% of Math Classes/ Less than 75% of Remediation Sessions	----	.10	2.06
Less than 75% of Math Classes / At least 75% of Remediation Sessions	----	----	1.29

*p<.05

TABLE 3

IMPROVEMENT IN PERCENTILE RANK ON CAT COMPUTATION SECTION BY TITLE-I-ELIGIBLE PUPILS IN COMPREHENSIVE MATHEMATICS "B" WHO HAD SCORED AT OR ABOVE THE 16TH%ILE IN 1977

	Pupils Who Attended At Least 75% of Regular Math Classes		Pupils Who Attended Less Than 75% of Regular Math Classes	
Remediation Sessions Attended	Scoring at or above 16th%ile in 1977	Maintaining or Exceeding %ile rank in 1978	Scoring at or above 16th%ile in 1977	Maintaining or Exceeding %ile rank in 1978
75% or more	232	125 (54%)[a]	11	4 (36%)
Less than 75%	61	30 (49%)	44	13 (30%)
TOTAL	293 (100%)	155 (53%)	55 (100%)	17 (31%)

[a] $z=16.30$, $p<.05$

TABLE 4

CHI SQUARE VALUES FOR COMPARISONS OF PERCENTAGES OF TITLE-I-ELIGIBLE PUPILS IN COMPREHENSIVE MATHEMATICS "B" MAINTAINING OR EXCEEDING THEIR 1977 CAT PERCENTILE RANKS IN 1978

Pupils who Attended	Pupils who Attended: At least 75% of Math Classes/ Less than 75% of Remediation Sessions	Pupils who Attended: Less than 75% of Math Classes/ At least 75% of Remediation Sessions	Pupils who Attended: Less than 75% of Math Classes/ Less than 75% of Remediation Sessions
At least 75% of Math Classes/ At least 75% of Remediation Sessions	.40	1.28	8.76*
At least 75% of Math Classes/ Less than 75% of Remediation Sessions	----	.56	4.05*
Less than 75% of Math Classes/ At least 75% of Remediation Sessions	----	----	.19

*p<.05

COMPREHENSIVE MATHEMATICS "C": SENIOR HIGH SCHOOL MATHEMATICS SPECIALISTS AND SKILL CENTERS

The Senior High School Mathematics Specialists and Skill Centers project is designed to improve the computational skills of Title-I-eligible pupils in Grades 10-12.

RATIONALE

Title I pupils in senior high schools have shown that they lack the basic mathematical skills which are necessary for everyday use and for passing entry-level examinations for employment. The mathematics programs designed for the senior high school were created to overcome this deficiency.

The 10th-grade mathematics specialist program was designed to give pupils enrolled in 10th-grade mathematics classes remedial help to improve their computational skills, and to give the teachers of these pupils ongoing assistance to meet the mathematical skill needs of their pupils. The 11th- and 12th-grade skill center program was designed to provide individualized help to pupils requiring further remediation after their experience in the 10th-grade program.

EXPECTED OUTCOMES

Participating Title-I-eligible pupils in Grades 10-12 should be able to improve their computational skills in mathematics. Achievement should be greater for pupils who regularly attend their mathematics classes and tutorial sessions than for those with low attendance.

The pupils who are enrolled in the 10th-grade mathematics classes which use the publication "Mathematics for Today" should also gain competence in skills necessary for everyday use and for passing entry-level examinations for employment. Teachers of these pupils should become familiar with methods and activities which could be used to provide drill or individualized instruction for the pupils.

PREVIOUS FINDINGS

Since 1975-1976, the 10th- grade mathematics specialist program and the 11th- and 12th-grade skill center program have been implemented in Title I high schools.

During 1975-1976, both programs attained their objectives of improving computational skills of Title-I-eligible pupils. For the 10th-grade mathematics specialist program, attendance at regular mathematics classes and at remediation sessions had a significant impact on pupil achievement. Among pupils who

attended at least 70% of their regular mathematics classes, the number of pupils scoring below the 16th percentile was reduced by 28%. Improvement was greatest for pupils who had also attended at least 70% of their remediation sessions, less for pupils who attended less than 70% of their remediation sessions, and poorest for pupils who had not been invited to remediaton sessions. For the 11th- and 12th-grade skill center program, pupils who attended at least 70% of their remediation sessions showed greater improvement than pupils who attended less than 70% of their remediation sessions.

During 1976-1977, both programs again attained their objectives. For the mathematics specialist program, improvement was greatest for pupils who had attended at least 70% of both their remediation sessions and mathematics classes, less for pupils who had attended less that 70% of either their remediation sessions or mathematics classes, and poorest for pupils who had attended less than 70% of both their remediation sessions and mathematics classes. For the skill center program, pupils who had attended at least 70% of their remediation sessions showed greater improvement than pupils who had attended less than 70% of their remediation sessions.

EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the Senior High School Mathematics Specialists and Skill Centers project focused on program implementation and pupils' computational skill improvement. The evaluation team used project records, interviews, and observations of the specialists, skill center teachers, aides, and regular classroom teachers to determine project implementation. The staff development sessions were also monitored. Pretest and posttest scores on the California Achievement Tests were used to determine pupil achievement.

IMPLEMENTATION

During the 1977-1978 school year, the two components of the Senior High School Mathematics project were fully implemented according to their planned modes of operation. The Division of Mathematics Education provided the mathematics specialists, skill center teachers, and skill center aides with 18 hours of staff development. At seven sessions, teaching techniques and activities for classroom use were shared by the project director, the staff of the Durham Center, and the project specialists and teachers. Topics included metric measurement, the calculator, chip trading and fractions, low-stress algorithms for addition, subtraction, and multiplication, games, and the use of the "Mathematics for Today" workbook. A workshop at the Durham Center provided the specialists, teachers, and aides with the opportunity to make games and other instructional materials.

The Mathematics Specialists Program

The 10th-grade Mathematics Specialists program was fully implemented in 11 Title I high schools. Examination of the weekly schedules of all 11 mathematics specialists, submitted in October, showed that they had allotted 60-64% of their time each week (15-16 periods) for remediation, 24-36% (6-9 periods) for staff development or assistance in classrooms, and 8-16% (2-4 periods) for monitoring pupil progress and providing diagnoses.

The number of pupils in Grades 10-12 selected for remediation ranged from 102 to 120 pupils. Although most were 10th-grade pupils, 9th-, 11th-, and 12th-grade pupils enrolled in 10th-grade general mathematics courses were also provided with remediation services. The specialists provided additional individual assistance or group instruction in the classroom during mathematics periods to pupils who scored below the 16th percentile on the CAT Computation section.

Using the Observational Checklist, Form A, the evaluator interviewed the specialists and observed them teach a remediation lesson. All pupils selected for remediation were also rostered to Title I reading classes and had scored between the 1st and 25th percentiles on the Computation section of the California Achievement Tests (CAT) in 1977. Selection and grouping of pupils were by grade, skill deficiencies, and availability of time in pupils' schedules. In eight of the 11 schools, eight groups of pupils were released from two of their five Title I reading classes for remediation. In one school, pupils were separated into two groups of five classes which met with the specialist three times a week for four-week periods. In another school, groups of students with the same skill deficiencies met three times a week for approximately three weeks. In the remaining school, eight classes were separated into three groups--two groups consisted of three classes; one group consisted of two classes. Classes met daily for six-week periods.

Observations during remediation lessons showed that all 11 mathematics specialists emphasized computational skill development. In seven of the 11 schools observed, individualized instruction was provided through the use of learning kits, worksheets, paper-and-pencil activities, games, hands-on activities, and cassettes. In four schools, specialists grouped pupils and instructed them on common areas of weaknesses. Pupil enrollment at remediation ranged from 9-17. Attendance ranged from 3-10 pupils and averaged 46%. Although specialists have taken steps to improve attendance, because of scheduling conflicts and cutting of classes by pupils, attendance was low.

The specialists provided staff development to their schools through presentations at departmental meetings and conferences with principals, teachers, and parents. Upon request, they shared methods, activities, and techniques with the teachers of Title-I-eligible pupils and provided demonstration lessons in the

classroom. The number of demonstration lessons varied from one a month to eight per week. In four schools, teachers using the "Mathematics for Today" workbook were provided with supplemental work, transparencies, and worksheets. In two schools with new teachers or substitutes, specialists shared additional materials and classroom management techniques.

Using the Observational Checklist, Form B, the evaluator interviewed and observed 12 tenth-grade general mathematics teachers in six schools. All were observed using the "Mathematics for Today" workbook as required by the project. Basic skills development was emphasized through the use of such materials as workbooks, worksheets, paper-and-pencil activities, chalkboard activites, the computer, filmstrips, and arithmetic texts. Teachers reported the need to provide supplemental instruction in computational skills because their pupils lacked the skills necessary to use the workbook. In all classes observed, all pupils were instructed in the same activity with up to three changes in presentation during a class period. Enrollment ranged from 9 to 30 pupils. Attendance ranged from 2 to 13 pupils and averaged 42%.

The Skill Centers Program

The Skill Centers program was fully implemented in all 11 Title I schools. Skill center teachers, assisted by skill center aides, provided remediation service to Title-I-eligible pupils who had completed the 10th-grade mathematics program. All these pupils were required to be rostered to Title I reading classes. Examination of the weekly schedules submitted by project teachers in October showed that they had allotted 24-25 periods for remediation of Grade 10-12 pupils who had scored between the 1st and 25th percentiles on the Computation section of the California Achievement Tests (CAT) in 1977. At the beginning of the school year, 165 to 180 pupils were selected on the basis of grade, skill deficiencies, and availability of time in pupils' schedules.

Remediation in mathematics was provided in various ways because of scheduling problems and indivdual school needs. In eight schools, remediation was offered to 12 groups of pupils twice a week. In one school, each pupil was offered remediation twice a week. However, because of scheduling problems, the same groups of pupils did not meet together on both days. In two schools, pupils were separated into three groups of five classes. In the first school, they met daily for six-week periods and in the second, they met for 12-15 day periods.

Using the Observational Checklist, Form A, the evaluator interviewed and observed skill center teachers teach a remediation lesson. All teachers emphasized basic computational skill development. In seven of the 11 lessons observed, instruction was individualized through the use of games, learning kits, worksheets, hands-on activities, filmstrips, and cassettes. In four schools, teachers worked with the entire class on common areas of weaknesses. Class

enrollment ranged from 5 to 16 pupils. Attendance ranged from 26% to 88%. Skill center teachers have taken steps to improve attendance. Because of scheduling conflicts and cutting of classes by pupils, attendance was low in some instances. In nine schools, skill center aides were observed assisting the skill center teachers. The aides worked directly with pupils, marked papers, and performed other clerical tasks during remediation lessons.

The skill center teachers also reported that they had worked with the other mathematics teachers in their schools, provided presentations at departmental meetings, and conferred with principals and parents about the program and the progress of pupils.

ATTAINMENT OF OBJECTIVES

The Mathematics Specialists Program

Objective 1: Participating pupils in 10th-grade mathematics classes who attended at least 70% of the regular 10th-grade mathematics classes and at least 70% of the scheduled remediation sessions will improve their mathematics skills to the extent that, between February 1977 and February 1978, the percentage of pupils scoring below the 16th percentile on the Mathematics Computation section of the California Achievement Tests will be significantly ($p<.05$) reduced.

The objective was fully attained.

The Mathematics Computation section of the California Achievement Tests (CAT) was administered to pupils in all 11 Title I high schools in February 1978.

The records of 1,388 pupils in Grades 9-12 were examined. Data from 689 pupils could not be utilized because of transfers, drop outs, or missing test results. The records of 699 pupils in ten schools were used to determine pupil achievement between February 1977 and February 1978. The records of one school could not be utilized because of incomplete information. Remediation service had been provided to 595 pupils who had scored below the 16th percentile and 104 pupils who had scored between the 16th and 25th percentiles in 1977. (The achievement of the latter group will be discussed in Objective 2.)

Of the 595 pupils who had scored below the 16th percentile in 1977, 249 attended at least 70% of their remediation sessions and 70% of their mathematics classes. As shown in Table 1, 39% of these 249 pupils scored at or above the 16th percentile in 1978 -- a significant ($p<.05$) reduction in number of pupils scoring below the 16th percentile.

Achievement was less among pupils in other attendance groups. Two of ten pupils who attended at least 70% of their remediation sessions but less than 70% of their mathematics classes scored at or above the 16th percentile. Among the 196 pupils who attended less than 70% of their remediation sessions but at least

70% of their mathematics classes, 24 scored above the 16th percentile. The smallest reduction, 10%, was shown by the 140 pupils who attended neither remediation sessions nor mathematics classes regularly. Comparison of the percentages indicated a significant difference among the attendance groups (χ^2=60.28, df=3, $p<.05$). Further analyses indicated a significant ($p<.05$) difference between pupils who attended both their remediation sessions and mathematics classes regularly, and (a) pupils who attended less than 70% of their remediation sessions but at least 70% of their mathematics classes, and (b) pupils who attended neither one nor the other regularly.

In general, the specialist program was successful in improving the computational skills of pupils enrolled in Title I 10th-grade mathematics classes who had scored below the 16th percentile in 1977. Improvement was greatest among pupils who attended both mathematics classes and remediation sessions on a regular basis.

Objective 2: Participating pupils in 10th-grade mathematics classes who attended at least 70% of their regular 10th-grade mathematics classes and at least 70% of the scheduled remediation sessions will improve their mathematics skills. Between February 1977 and February 1978, 10% of the pupils who scored between the 16th and 25th percentiles on the Mathematics Computation section of the California Achievement Tests will maintain or increase their 1977 percentile ranks.

The objective was fully attained.

The records of 104 pupils who had scored between the 16th and 25th percentiles on the Mathematics Computation section of the CAT in 1977 were examined. Of the 51 pupils who attended at least 70% of their remediation sessions and 70% of their mathematics classes, 55% maintained or exceeded their 1977 percentile ranks. The expected percentage, 10%, was greatly exceeded (z=7.82, $p<.05$).

As shown in Table 2, pupils in lower attendance groups improved to a lesser extent. However, no significant difference was found among the percentages (χ^2=2.56, df=3, $p>.05$). Among the 35 pupils who attended less than 70% of their remediation sessions but at least 70% of their mathematics classes, 46% maintained or exceeded their previous percentile ranks. One of the three pupils who attended at least 70% of their remediation sessions but less than 70% of their mathematics classes, maintained or exceeded their 1977 percentile ranks. Five of the 15 pupils who attended neither remediation sessions nor mathematics classes regularly also maintained or exceeded their previous ranks.

Skill Center Program

Objective 3: Participating pupils who attended at least 70% of their scheduled remediation sessions will improve their mathematics skills to the extent that

between February 1977 and February 1978, the percentage of pupils scoring below the 16th percentile on the Mathematics Computation section of the California Achievement Tests will be significantly ($p<.05$) reduced.

The objective was fully attained. The Mathematics Computation section of the California Achievement Tests (CAT) was administered to pupils in Title I schools in February 1978.

The records of 2,127 pupils in Grades 10-12 from 11 schools were examined. Data from 1,012 pupils could not be utilized because of transfers, drop outs, or missing test resutlts. Data from one of the schools could not be used. The records of 1,115 pupils were used to determine pupil achievement between February 1977 and February 1978. Remediation service had been provided to 938 pupils who had scored below the 16th percentile and 177 pupils who had scored between the 16th and 25th percentiles in 1977. (The achievement of this latter group will be discussed in Objective 4.)

As shown in Table 3, 470 of the 938 pupils who scored below the 16th percentile in 1977 attended at least 70% of their remediation sessions. In 1978, 29% of these regularly attending pupils scored at or above the 16th percentile. This was a significant reduction in the number of pupils scoring below the 16th percentile ($z=13.86$, $p<.05$).

Among the 468 pupils who attended less than 70% of their remediation sessions, the reduction was 10%. Comparison of the percentages of these groups, shown in Table 3, indicated that pupils who attended remediation sessions regularly showed more improvement than pupils who did not attend regularly ($\chi_1^2 = 49.43$, $p<.05$).

Objective 4: Participating pupils who attended at least 70% of the scheduled remediation sessions will improve their mathematics skills. Between February 1977 and February 1978, 10% of the pupils who scored between the 16th and 25th percentiles on the Mathematics Computation section of the California Achievement Tests will maintain or exceed their 1977 percentile ranks.

The objective was fully attained.

The records of 177 pupils in Grades 10-12 who had scored between the 16th and 25th percentiles on the Mathematics Computation section of the CAT in 1977 were examined. As shown in Table 4, 54% of the 99 pupils who attended at least 70% of their remediation sessions maintained or exceeded their 1977 percentile ranks, greatly exceeding the expected percentage of 10%. Of the 78 pupils who attended less than 70% of their remediation sessions, 40% maintained or exceeded their previous percentile ranks. Those who attended regularly were able to maintain their percentile ranks. However, achievement was not found to be related to level of attendance for pupils who had scored between the 16th and 25th percentiles in 1977 ($\chi_1^2 = 3.33$, $p>.05$).

SUMMARY AND CONCLUSIONS

The Senior High School Mathematics project was established to improve the computational skills of Title-I-eligible pupils in Grades 9-12 and to provide the 10th-grade mathematics teachers of these pupils with assistance to meet their pupils' instructional needs. The mathematics specialists program and skill centers program were fully implemented in all Title I high schools. Both programs helped Title-I-eligible pupils improve their computational skills.

In the mathematics specialists program, regular attendance at mathematics classes and at remediation sessions had a positive impact on the achievement of pupils who had scored below the 16th percentile in 1977. Those who attended at least 70% of their mathematics classes and 70% of their remediation sessions demonstrated a 39% reduction in number of pupils scoring below the 16th percentile. Among the regularly attending pupils who had scored between the 16th and 25th percentiles in 1977, 55% maintained or exceeded their 1977 percenitle ranks, greatly exceeding the expected 10%.

In the skill centers program, regular attendance at remediation sessions also had a positive impact on the achievement of pupils who had scored below the 16th percentile in 1977. Those who attended regularly demonstrated a 29% reduction in the number of pupils scoring below the 16th percentile. Among the regularly attending pupils who had scored between the 16th and 25th percentiles in 1977, 54% maintained or exceeded their previous percentile ranks. The expected percentage of 10% was greatly exceeded.

Since attendance was important to the achievement of pupils, factors related to attendance will be investigated further during the next school year.

TABLE 1

CHI SQUARE VALUES FOR COMPARISONS OF PERCENTAGES OF PUPILS IN COMPREHENSIVE MATHEMATICS "C" WHO HAD SCORED BELOW THE 16TH%ILE IN 1977 SHOWING IMPROVEMENT IN PERCENTILE RANK ON THE CAT COMPUTATION SECTION IN 1978 (MATHEMATICS SPECIALISTS)

Percentage of Pupils Scoring at or above 16th%ile in 1978 among those who:	Attended at least 70% of Remediation Sessions/ less than 70% of Math Classes (20%)	Attended less than 70% of Remediation Sessions/ at least 70% of Math Classes (12%)	Attended less than 70% of Remediation Sessions less than 70% of Math Classes (10%)
Attended at least 70% of Remediation Sessions/ At least 70% of Math Classes (39%)[a]	1.40	38.53[b]	35.96[b]
Attended at least 70% of Remediation Sessions/ less than 70% of Math Classes (20%)	---	.55	.90
Attended less than 70% of Remediation Sessions/ At least 70% of Math Classes (12%)	---	----	.40

[a] $z=12.62$, $p<.05$

[b] $p<.05$

TABLE 2

IMPROVEMENT IN PERCENTILE RANK ON CAT COMPUTATION SECTION BY PUPILS IN COMPREHENSIVE MATHEMATICS "C" WHO HAD SCORED AT OR ABOVE THE 16TH%ILE IN 1977 (MATHEMATICS SPECIALISTS)

	Pupils Who Attended At Least 70% of Regular Math Classes		Pupils Who Attended Less Than 70% of Regular Math Classes	
Remediation Sessions Attended	Scoring at or above 16th%ile in 1977	Maintaining or exceeding 1977 %ile rank in 1978	Scoring at or above 16th%ile in 1977	Maintaining or exceeding 1977 %ile rank in 1978
70% or more	51	28 (55%)[a]	3	1 (33%)
Less than 70%	35	16 (46%)	15	5 (33%)

[a] $z=7.82$, $p<.05$

TABLE 3

IMPROVEMENT IN PERCENTILE RANK ON CAT COMPUTATION SECTION BY PUPILS IN COMPREHENSIVE MATHEMATICS "C" WHO HAD SCORED BELOW THE 16TH%ILE IN 1977 (SKILL CENTERS)

Remediation Sessions Attended	Pupils Scoring Below 16th%ile in 1977	Pupils Scoring At Above 16thile in 1978
70% or more	470	135 (29%)[a b]
Less than 70%	468	49 (10%)[b]

[a] $z=13.86$, $p<.05$

[b] $\chi^2=49.43$, $p<.05$

TABLE 4

IMPROVEMENT IN PERCENTILE RANK ON CAT COMPUTATION SECTION
BY PUPILS IN COMPREHENSIVE MATHEMATICS "C"
WHO HAD SCORED AT OR ABOVE THE 16TH%ILE
IN 1977 (SKILL CENTERS)

Remediation Sessions Attended	Pupils Scoring At Above 16th%ile in 1977	Pupils Maintaining or Exceeding 1977 %ile Rank in 1978
70% or more	99	53 (54%)[ab]
Less than 70%	78	31 (40%)[b]
TOTAL	177	84 (47%)

[a] $z=10.64, p<.05$

[b] $\chi^2=3.33, p>.05$

AIDE SERVICES
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Aide Services projects have been grouped together because of their common focus on the services of paraprofessionals to Title I pupils and their teachers: ("A") K-3 Aides and ("B") Parent Aides. The composite project provides aides in classrooms to increase the adult/pupil ratio and to facilitate individualization of instruction in reading and/or mathematics.

RATIONALE

Each of these Aide Services projects provides training and experience to enable aides to assist teachers and to work with individuals or groups of Title-I-eligible children as tutors, resource persons, and assistants. Emphasis is placed on improving the participating pupils' basic skills, especially in reading. Aides' participation in the educational process allows teachers to plan instruction around individual and group needs and permits more individualized attention to specific needs of the participating eligible children.

("A") Kindergarten Aides: Title I pupils score below national norms in reading on standardized tests. These pupils need more individualization of instruction because of learning deficiencies.

Teachers with Title I pupils in large classes need supportive assistance if they are to give more attention to individuals and small groups of pupils. Aides provide this supportive assistance by helping the teachers with their individual and small-group instruction and by further relieving them of some routine clerical and housekeeping tasks. The presence of another adult in the classroom not only increases the adult/pupil ratio (promoting greater flexibility in grouping and in differentiation of instruction) but also permits greater social interaction between pupils and adults.

("B") Parent Aides: The introduction of large numbers of trained parent aides into urban classrooms represents a major structural change in American education. The project has profound implications for classroom organization, for pupil learning, for school-community relations, and for the changing role of the teaching profession. With respect to classroom organization, the addition of another adult can allow greater flexibility in grouping procedures and in differentiation of levels of instruction. The expected increase in individualized instruction can improve pupil achievement. The need for increased communication between the community and the school can be satisfied through the direct involvement of parents from the community in the educational program.

EXPECTED OUTCOMES

("A") Kindergarten Aides: With aides helping their teachers, children are expected to have more beneficial learning experiences, more personal supervision and reinforcement, and more rapid feedback. The aides can be available to stimulate and encourage the pupils spontaneously or upon request. Because individual and small-group learning and a wider range of activities are more feasible in classrooms with aides than in classrooms where the teacher is working alone, the teacher/aide teams can provide Title I pupils a classroom learning environment suitable to the pupils' varying needs.

Where possible, the use of aides who live in the school neighborhood is expected to encourage a direct and readily understood line of communication between adults and pupils. The aides can help the children adjust to their school situations and can interpret some aspects of the children's classroom behavior to the teachers.

("B") Parent Aides: With an increased amount of individualized instruction, the teacher can alleviate pupils' diagnosed reading and mathematics weaknesses.

PREVIOUS FINDINGS

("A") Kindergarten Aides: In the project's early years, it was found that by reducing the number of noninstructional tasks the teachers performed, aides increased the amount of time available for individualized and small-group instruction. Individualization of instruction was facilitated when teachers used aides for instructional tasks but not when the aides performed noninstructional tasks.

During the project's operation, teachers with aides devoted more time to individual and small-group instruction, especially in reading than teachers without aides. Teachers with aides also had less frequent discipline incidents. The great majority of aides, who consistently served four or fewer classes a week, spent an average of approximately 2/3 of their time in supervising and/or tutoring individuals or small groups, approximately 1/6 of their time in clerical duties, and approximately 1/6 of their time in such activities as class trips, operation of audiovisual equipment, and housekeeping tasks

("B") Parent Aides: Each year's evaluative findings since 1968-1969 have been generally positive. Aides have indicated satisfaction with their staff-development (in service education) sessions as sources of useful ideas applicable to their work with pupils. Observation visits by evaluators have revealed the expected degrees of pupil grouping and instructional differentiation, and appropriate tasks being performed by the aides. Principals and teachers have repeatedly praised the parent aides' effectiveness in individualizing the school's instructional program. In a 1975-1976 survey conducted by the Coordinator of Nonpublic School Projects, the Parent Aides program received the highest ratings from the principals of eligible schools as the most effective Title I project.

EVALUATION OF THE CURRENT YEAR

("A") Kindergarten Aides: The current year's evaluation focused on the degree to which individual and small-group instruction of participating Title-I-eligible children was enhanced by the provision of aides to classroom teachers. The assessment was based on observations and interviews with aides and teachers.

("B") Parent Aides: The evaluation included formal observation of project classrooms to determine the degree to which teachers individualized their instructional program with parent-aide assistance.

IMPLEMENTATION

("A") Kindergarten Aides

In 1977-1978 the project included 25 kindergarten aides working with Title-I-eligible pupils in the public schools.

The evaluation of kindergarten aides included individual observations of and interviews with 13 randomly selected aides and their associated teachers. The aides spent most of their time providing instructional, physical, and socio-emotional services to individuals and small groups of Title I pupils, mainly in reading and mathematics. All aides worked with four or fewer classes each week.

Although patterns of aide utilization varied, it was common for kindergarten aides to work with one teacher in the morning and another in the afternoon. Aides were observed performing instructional and noninstructional tasks compatible with the project's objectives.

The 13 teachers interviewed by the evaluator reported that their aides, because of years of experienced service, had become nearly indispensable to them. When aide time had been reduced because of budget cuts, teachers reported the learning rates of their pupils dropped significantly.

All teachers interviewed indicated that the aides' most valuable assistance was reinforcing teacher-taught reading or mathematics skills with individuals or small groups of pupils. The teachers were then free to work without interruption with more advanced pupils. Teachers reported aides provided socio-emotional service to pupils such as encouragement and support and physical services such as preparing materials, recording grades and marking papers. These services provided a base for the pupils' cognitive learning.

("B") Parent Aides

During 1977-1978, the Parent Aides project provided instructional and non-instructional support services to Title I pupils in nonpublic schools.

The number of aides per school ranged from two to eight persons who, in the typical school, conducted drills in basic skills areas, administered tests, monitored student instructional progress, and taught selected segments of the basic skills instructional program under teacher supervision. Aides were observed working with both individual pupils as well as small groups in either the classroom or in designated areas of the school building.

Each school's aides received support and direction from one of the three project consulting supervisors throughout the school year during regularly scheduled in-service workshops and training sessions. During training sessions the aides were introduced to both new teaching materials and concepts governing such areas as reading comprehension, individualized math instruction, and instructional games.

The evaluation team visited 12 schools at different times in the school year. The sample of schools was selected from each of three consultant districts which formed the basis of stratification for the sample. (A "consultant district" comprises those schools that are under a single supervisor.) At each site various classrooms were systematically observed, and individual conferences were held with teachers, principals, and parent aides, all of whom were in accord as to the value and importance of the program.

ATTAINMENT OF OBJECTIVES

("A") Kindergarten Aides

Objective 1: Efficient use of the aides' time will be maintained by teachers so that aides will spend at least 60% of their time in supervising and/or working with individuals (one or two children) or small groups (from three to seven children), not more than 20% of their time in clerical tasks (e.g., grading, record keeping), and not more than 20% of their time in such tasks as class trips, operation of A.V. equipment, housekeeping, and other activities. This will be verified by aide and teacher interviews and observations made by members of the evaluation team using the Observational Checklist.

This objective was fully attained.

Data were evaluated from the locally developed Aides Observational Checklist. The Checklist covered four kinds of aide activity and behaviors: (a) service to pupils (instructional, physical, socio-emotional, etc.); (b) clerical (record keeping, etc.); (c) housekeeping (cleaning/straightening, etc); and (d) other. The data were gathered from observations of 13 kindergarten aides.

Overall, kindergarten aides spent an average of 95% of their time providing instructional, physical, or socio-emotional services to individuals or small groups

of children; 1% of their time in clerical tasks; and 4% of their time in housekeeping tasks and other activities.

Time spent in providing direct pupil services fell into the following service groups: instructional services with one child (26%), with one or more groups (26%), with the whole class (5%), or circulating among pupils (18%); preparation of materials (8%); distribution and/or collection of materials (5%), accompanying pupils to supplementary classes, etc. (2%), other physical help to pupils (2%); socioemotional help (support, encouragement) to pupils (3%), and housekeeping chores (cleaning/straightening room, etc.) (5%).

Forty-six percent of the help aides provided was in the language arts area, 28% in math-related areas, and 26% in other areas.

Objective 2: Aides will not serve more than four classes of children per week as indicated by interviews with aides and teachers and observations of aides' schedules.

This objective was attained.

One hundred percent of the kindergarten aides observed were assigned to work with not more than four classes each week, completely meeting the objective. Ten aides worked with two classes, one aide worked with one class, one worked with three classes, and one worked with four classes.

("B") Parent Aides

Objective 3: The teachers will efficiently use the aides' time in that (a) at least 60% of the aides' time will be spent in working with individuals or small groups of from three to seven children; (b) with respect to the level of instructional differentiation, in more than 90% of the observations all pupils will be working on different assignments (c) with respect to the role of the teacher, in at least 20% of the observations, the teacher will be active with one-half or less of the class.

This objective was fully attained.

The evaluation team visited 12 schools over the course of the school year. In each school of a random sample of schools, there were three 15 minute periods in which observations were made. The activities observed during these periods exceeded the criteria: (a) 100% of the aides' time was spent with individuals or small groups of students; aides were not found to be engaged in clerical tasks, housekeeping, or other activities not related to instruction. In 47% of the time the aides worked with one or two pupils, while in 53% of the time aides worked with groups of from three to seven pupils; (b) in no cases were the pupils all working on the same task at the same time; the observed instructional differentiation of 100% exceeded the 90% criterion; (c) teachers were working actively

and directly with one-half or fewer of their pupils during 58% of the time (at least 20% was expected). In 42% of the instances teachers worked with slightly more than one-half of the class -- never with the entire class.

SUMMARY AND CONCLUSIONS

Both components of the Aides Services project -- Kindergarten Aides and Parent Aides -- were fully implemented in accordance with their planned modes of operation. All objectives, mostly emphasizing direct, meaningful service to individuals and groups of pupils, were attained.

Evaluators' observations and interviews (formal and informal) with teachers and principals indicated that the aides greatly enhanced the learning process by facilitating individualized and small-group instruction in basic skills. Statements by teachers and principals indicated that the services of the aides were highly regarded.

Aides in both public and nonpublic schools were observed to spend most of their time in direct service to, and in instructional activities with, pupils. Beyond their direct assistance to individual pupils, aides enabled teachers to give attention to smaller numbers of pupils, to avoid assigning the same learning activity to the entire class, and to encourage pupils to work individually or in small groups.

Teachers and administrators found aides to be of great help to them and their classes because of the aides' professionalism, experience, and responsible work habits.

READING SKILLS CENTERS
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Individualized instruction for groups of seriously deficient readers is provided through the use of prescribed materials in a Reading Skills Center staffed with a reading teacher assisted by aides.

RATIONALE

Citywide testing over the past few years has indicated that children in Grades 3-7 have serious deficiencies in decoding, comprehension, and vocabulary skills. Diagnosis and correction of these serious reading deficiencies prior to their entry into secondary schools are crucial to their future cognitive attainment. Specialized assistance is required since these children have a history of low success in conventional classrooms.

EXPECTED OUTCOMES

Pupils attending three or more periods per week will show measurable improvement in phonics, decoding, vocabulary, and comprehension skills.

PREVIOUS FINDINGS

Since the project's initiation in 1966, pupils have shown improvement in comprehension, word-attack, and phonics skills. In 1970-1971, standardized tests indicated that project pupils' low scores in vocabulary were reversed after two years, and low scores in comprehension were reversed after one year. During the following years pupils continued to improve their basic reading skills in phonics and comprehension.

In 1976-1977, the full complement of aide services was not provided to all the centers due to funding problems. The instructional reading levels of 77% (more than the expected 75%) of the project pupils increased at least one book level during the year; 46% (not the expected 55%) increased two or more levels. Pupils' decoding skills improved by a mean score gain of 19.43% instead of the expected twenty percent based on the phonics test administered.

EVALUATION OF THE CURRENT YEAR

The current evaluation of Reading Skills Centers involved observations, interviews, and analysis of test results. Score gains from pretest to posttest in phonics and reading comprehension were compared with project criteria. Because vocabulary skills are being emphasized this year, a vocabulary test is being developed and piloted.

IMPLEMENTATION

In 1977-1978, the project's intended mode of operation was fully implemented.

Pupils were provided with an individualized, diagnostic-prescriptive reading program. The project's primary focus was on those pupils with the most severe reading problems. The evaluation team, using an observational checklist, completed nine observations of the 14 reading centers.

Most centers were staffed with one full-time and one half-time aide to assist the reading teacher in the preparation for instruction, in the follow-up of each pupil's progress, and in reviewing work with pupils. During eight of the nine observations teachers were observed working with individuals or small groups of children. Some teachers worked with all groups during the reading period. Aides were observed spending all of their time assisting individual or small groups of children.

Three or more kinds or levels or materials were used during eight of the nine observations. Assigned work for each period consisted of three to four activities in areas of reading which included comprehension, word-attack, study skills, or literature. In each center, two computer-terminal stations were installed to provide additional instruction in the area of reading comprehension. Each pupil was given a prescription of tasks to do which included use of reading books, workbooks, listening corners, computer terminals, games, or library corners. Pupils tended to work diligently on their assigned tasks, which were changed daily. The average number of pupils attending during an instructional period was 19.

The project teachers submitted the records of 1,527 pupils in Grades 3-7. Of these 8% were in Grade 3, 34% in Grade 4, 30% in Grade 5, 27% in Grade 6, and 1% in Grade 7.

The project's program coordinator provided on-site assistance to the reading teachers and conducted monthly staff development half-day sessions.

ATTAINMENT OF OBJECTIVES

Objective 1: Pupils at each level who participate in the program for at least 45 minutes each day three or more times a week during the school year will improve their comprehension skills as indicated by Fall and Spring administration of

Informal Reading Inventories (IRI). A minimum of 75% of the group will gain one book level and 50% will gain two book levels.

This objective was partially attained.

Pupils enrolled in the project were pretested in September and posttested in May by reading teachers using informal reading inventories. Only those 1,390 pupils who attended at least three times a week and had both pairs of scores were included. Of these pupils, 85% gained at least one book level based on the IRI instructional reading level criterion of the informal reading inventory. A gain of two or more book levels was attained by 46% of the pupils. A median project level of Book 2 in September was raised to a Book 3 level based upon a May administration.

When the data were analyzed in terms of years of service received, pupils being served for the first time were found to have the greatest need in comprehension skills.

Table 1 shows the gains made by pupils for whom there were data on the number of years they received service.

Objective 2: First-year pupils participating in this project three or more times a week during the school year will improve their decoding skills as indicated by a 20% gain in the mean score of the Phonics Inventory administered in September and May.

This objective was not attained due to several unique factors. A new 85-item phonics inventory using nonsense syllables as cues was administered to project pupils in September and May. There were 800 first-year pupils enrolled who had both pretest and posttest scores and had attended at least three times a week.

These pupils participating only one year had a pretest mean raw score of 61.04, which was unexpectedly high. The gain of 4.7 determined from the April testing fell far short of the expected 20% gain because of the inadequate ceiling of the test. A review of April data for first-year pupils showed that 29.5% had 90% mastery (only 15.5% had mastery in September); 54.8% scored between 89-55%; and 15.8% scored below 55%. Among the 1st-, 2nd-, and 3rd-year participating pupils, 33% attained mastery of phonics skills. This figure exceeds the previous year's outcomes.

The use of the machine-scorable phonics test will have to be reviewed. This objective will also need to be reviewed in light of this year's results.

Objective 3: Of the children who attend three times per week, 50% will gain at least 80% mastery in vocabulary skills based upon a test of a sampling of the Philadelphia basic spelling words.

This objective was not attained.

It is quite clear that the criterion for this objective was too optimistic. The vocabulary test being developed measured vocabulary skills for Primer, Book 1, Book 2, and Book 3 levels. End-of-year reading levels data based upon IRIs indicated that 43.7% of the participating pupils were reading at a Book 2 level or below. Thus, to have expected 50% of the pupils to gain mastery was unrealistic. It is clear that this test and this objective need revision in light of the data collected.

SUMMARY AND CONCLUSIONS

The Reading Skills Centers project has continued to fully implement the various aspects of its program. Teachers, assisted by reading aides, provided an individualized, diagnostic-prescriptive reading program using an eclectic teaching approach.

In terms of decoding and comprehension skills, 85% of the pupils gained at least one instructional book level and 46% gained two or more book levels. These results were better than results for 1976-1977.

When the participating pupils were tested with a multiple-choice phonics test, their pretest scores were much higher than in previous years. These unanticipated higher scores (i.e., a ceiling effect) prohibited the attainment of a 20% increase in the posttest mean score for pupils being served for one year. The new test indicated that one third of all participating pupils mastered 90% or more of the items tested.

The data from the vocabulary test highlighted several areas of reading comprehension that needed emphasis and indicated that children could successfully deal with the complex processes of analogies and opposites.

This project continues successfully to help children with inadequate reading skills improve and develop higher skills.

IMPROVEMENT OF READING SKILLS "C"
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Part "C" of the Improvement of Reading Skills project provides part-time reading teachers who offer remedial instruction to pupils with reading difficulties.

RATIONALE

The participating target-area pupils have failed to master the basic reading skills and are reading below grade level. The project is based upon the assumption that supplementary services can ameliorate low achievement levels resulting from reading difficulties. Services are provided to improve the reading comprehension and word-attack skills of the participating pupils.

EXPECTED OUTCOMES

Through participation in the project, the pupils should improve their reading comprehension and their word-attack skills.

PREVIOUS FINDINGS

Early evaluations have indicated that project pupils have improved their instructional reading levels. In recent years the project has been successful in teaching pupils with weak skills in reading to improve their comprehension, word-attack, and phonics skills. Since 1974 the percentage of pupils gaining one instructional book level has varied from 90 to 85 percent. However, the percentage of pupils gaining two book levels or more has continued to exceed the 60% expectation. The percentage of pupils attaining an 80% mastery of phonics skills has decreased somewhat over recent years. This can be partially attributed to the additional emphasis on the more complex comprehension skills.

EVALUATION OF THE CURRENT YEAR

This year's evaluation of Improvement of Reading Skills "C" focused on (a) the degree to which the participating pupils demonstrated increased reading-achievement levels, as indicated by differences between pretest and posttest scores on a group informal reading inventory; and (b) the degree to which the pupils improved their decoding skills, as indicated by scores on a project-specific phonics inventory.

The evaluation team conducted the evaluation through observations, interviews, questionnaires, and analysis of test results.

IMPLEMENTATION

In 1977-1978, the project's intended mode of operation was fully implemented.

A questionnaire for project teachers was distributed in January to determine average class size and grouping procedures, instructional schedules, maintenance of pupil records, and the degree of interaction with the regular classroom teachers. Using an observational checklist, the evaluation team conducted 13 classroom observations in 11 of the 41 reading centers. Teacher interviews were conducted with each of the 11 teachers visited.

All centers provided supplemental reading instruction to participating pupils. Teachers indicated that 99% of the children attended at least three times per week. Scheduling problems at several sites prevented the remaining 1% from receiving instruction three times a week. Instructional periods averaged 50 minutes in length, and average class size was eight.

Teachers tended to group their classes by grade level. However, the reading level was used as the criterion for grouping when there were two or more classes at the same grade level. Project teachers maintained individual pupil records, and most of them communicated prescriptions and diagnoses to the regular classroom teacher often during the year. Much sharing of information was done on an informal basis.

The evaluators found pupils involved in instructional activities during all 13 observations. Teachers used individual, small-group, and large-group instructional methods. Teachers used 96% of their time for instructional tasks and 4% for clerical tasks. Individualized or small-group instruction was observed during 12 of the 13 observations. Pupils were directed into several different activities during the course of a period and used varied materials for skill development. Most teachers were observed using three or more kinds of materials.

Structured interviews were conducted with 10 of the 11 teachers observed; one teacher received an informal oral interview. Teachers interviewed indicated that 65% of the pupils were new to the program. All 10 teachers formally interviewed stated that comprehension and word-attack skills were the two areas in which project pupils experienced the most reading difficulties. Most of the instructional time was devoted to these areas.

Teachers, after consultation with their principals, were given the option of providing the 15 hours of instruction with (1) a five-day morning program of three hours or (2) three days of five hours each. Twenty-three centers operated three days per week, and 18 used the five-day morning program.

The project's coordinator provided on-site assistance to the teachers and conducted several total group staff development sessions. Efforts were made to familiarize teachers with materials which enabled them to make wiser selections of instructional materials to meet pupil needs at their sites.

ATTAINMENT OF OBJECTIVES

Objective 1: Project pupils will increase their reading decoding and comprehension levels to the extent that 90% of the pupils gain at least one book level and 60% gain two or more book levels between September pretest and May posttest on a group Informal Reading Inventory or on a CLOZE test.

This objective was fully attained.

Informal reading inventories (IRIs) were administered by the teachers in September and May. Ninety-five percent of the pupils gained at least one book level; 81% gained at least two levels. The numbers of pupils in each grade who made the specified gains between pretest and posttest are summarized in Table 1.

Objective 2: Project pupils who have been served either one year or two will improve their phonics skills to the extent that there is an increase of 20 points in the percentage of pupils attaining an 80% mastery score (68 or more correct out of 85 items) on a sight and sound phonics inventory between September pretest and May posttest.

The objective was attained.

In September and May, a new 85-item, project-specific phonics inventory using nonsense syllables as cues was administered to the pupils. Results for one- and two-year pupils are summarized in Table 2.

On the pretest, 50% of the pupils being served one year attained the specified 80% mastery score and 67% of those served two years attained mastery. On the posttest 83% of the one-year pupils attained the mastery score and 90% of the two-year pupils did so. The increase of 33 percentage points for one-year pupils and 23 percentage points for two-year pupils surpassed the 20-point expectation.

SUMMARY AND CONCLUSIONS

The Improvement of Reading Skills "C" project's intended mode of operation was fully implemented by providing a supplemental reading instruction program to pupils at 41 centers.

The project objectives were fully attained. In reading achievement, 95% of the pupils (more than the expected 90%) gained at least one book level; 81% (more

than the expected 60%) gained at least two book levels. Pupils in the program for one or two years exceeded the criterion for phonics mastery (a 20-point gain in the percentage of pupils attaining mastery).

The project continues to be successful in providing pupils with needed reading skills.

INDIVIDUALIZED EDUCATION CENTER
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Individualized Education Center (IEC) provides a compensatory program for pupils in St. Mary's Interparochial School, focusing on development of language arts and mathematics skills and using selected individualized instructional practices.

RATIONALE

Pupils attending the IEC have varied ethnic and social-class backgrounds: there are affluent whites from the St. Mary's parish, poverty-stricken blacks from the Our Lady of the Blessed Sacrament parish, and pupils from Spanish-speaking families. The result is an experiment in voluntary integration of children bussed from different neighborhoods within the city.

The complex makeup of the pupil population requires the project's staff members to commit themselves to a philosophy and program of education which encourages the development of each pupil's self-esteem and appreciation of the worth of others. The staff attempts to develop each child's sense of social justice and responsibility by promoting self-directed learning experiences intended to correct the individual pupil's basic skill weaknesses.

EXPECTED OUTCOMES

Through individualization of instructional practices, IEC aims for the improvement of pupil performance in basic skills, and the development of positive attitudes toward self and toward school.

PREVIOUS FINDINGS

During its initial years (1968-1970) the project was evaluated by the coordinator of nonpublic school Title I projects. The evaluations were formative and revealed that the enabling objectives had been attained.

Beginning with the 1970-1971 school year, the evaluation focused on the degree of individualization of instructional practices. Attempts to individualize instruction through innovative class structure and teaching methods were observed. During subsequent years (1971-1972, 1972-1973), continued attempts to individualize instruction were hindered by a number of factors: (a) a high staff turnover

rate, (b) a change of principals, (c) fluctuation in pupil enrollment, (d) some scheduling difficulties, and (e) a limited budget for instructional materials. During these years, instructional differentiation was maintained through use of multiple-group settings.

From 1970 through June 1973, the average IEC pupil improved sufficiently within each year to maintain his/her standing in relation to national norms on the Iowa Tests of Basic Skills (ITBS). Between June 1973 and March 1974, average gains in grade-equivalent score ranged from one month to 15 months for the Arithmetic Skills, Reading Comprehension, and Vocabulary subtests. Excluding the three-month summer recess, this period included roughly six instructional months. However, the norms provided by the publisher of the test for these testing periods (and based on the questionable inference of cognitive growth during the summer recess) indicated that actual gains failed, in 14 of 20 instances, to maintain the pupils' relative standing with the norming population.

From 1973 through 1977, systematic observations of IEC classrooms revealed that in all observed classes the teachers attempted to provide individualized instruction through effective grouping procedures, teacher-directed and pupil-selected individual activities, and the judicious use of a wide variety of available multimedia equipment and instructional materials. In 1975 IEC pupils generally reported positive attitudes toward their school experiences and a positive self-concept.

In Spring 1975 the California Achievement Tests (CAT) replaced the ITBS. Using the results of a comparability study conducted by the Office of Research and Evaluation, the evaluation team converted the 1974 ITBS mean scores to "predicted CAT scores" which were further converted to CAT national percentile ranks. A comparison of these 1974 results with the 1975 CAT results revealed that average gains in grade-equivalent score were sufficient to maintain or improve national percentile ranks in 7 of 10 instances; between 1975 and 1976, in 18 of 28 comparisons; and between 1976 and 1977, in 17 of 28 comparisons.

EVALUATION OF THE CURRENT YEAR

The IEC evaluation during the current year focused upon the level of instructional differentiation and the development of the pupils' basic academic skills including the development of the sight-word vocabulary of pupils in grades 1 and 2.

IMPLEMENTATION

In 1977-1978, the project was fully implemented according to its intended mode of operation. Six of eight IEC teachers returned for the current school year. The addition of two more staff members did not hinder the implementation of individualized instructional practices early in the school year.

Grades 1-4 again functioned as self-contained classes while Grades 5-8 shared teachers in reading/language arts and mathematics. Sufficient instructional materials and multimedia equipment were available in each classroom to provide appropriate learning experiences for all students according to their instructional levels. The IEC continued to receive the services of a full-time reading teacher and benefits from other Title I projects (Parent School Aides, Multimedia Center, Education in World Affairs). All eight teachers received a minimum of two hours per day of aide assistance during reading, language arts and mathemtics classes. Some teachers received as much as five hours of aide assistance a day. The six parent aides provided service to the IEC classrooms on a rotating schedule. This schedule was reported to be efficent and energizing for all parties involved.

The project again implemented an extensive tutoring program involving students from a local college, and students from the upper grades within the school. Moreover, some IEC students were eligible for special reading services provided by a state funded agency.

Finally, IEC teachers were observed using the Fountain Valley Teacher Support System and the Continuous Progress Program of the Archdiocese of Philadelphia. Both systems appeared to aid the staff in individualizing instruction.

ATTAINMENT OF OBJECTIVES

Objective 1: During the 1977-1978 school year at least 75% of the students will master at least 90% of the words on the Basic Sight Vocabulary of 200 Words (by E. W. Dolch) administered in May to all project students in Grades 1 and 2.

This objective was fully attained.

The Basic Sight Vocabulary of 220 Words was compiled by E. W. Dolch. The words were reorganized into two lists of "easier" and "harder" words. These two lists were further reorganized using random selection into four "easier" and four "harder" lists containing between 25 and 28 words each.

Each first-grade student was administered all four "easier" lists. Each second-grade student was administered two "easier" lists and two "harder" lists. Each student was encouraged to read instantly the words on sight aloud or to continue through the lists until he/she was able to read any subsequent word. If the task appeared too difficult the session was stopped.

A total of 44 students (21 first-graders and 23 second graders) participated in the procedure. Of these 44 students, 35 (80%) successfully read aloud, on sight, at least 90% of the words presented to them.

Objective 2: During the 1977-1978 school year students will develop basic skills in reading as indicated by an improvement of at least two (2) percentile points in the average student's national percentile rank, between May 1977 and May 1978 administrations of the California Achievement Tests (Reading Vocabulary and Reading Comprehension sections).

This objective was partially attained.

The Comprehension and Vocabulary sections of the California Achievement Tests (CAT-70) were administered to project students in Grades 3-8 in May 1978. Each grade's mean score was converted to the corresponding individual student national percentile rank in the publisher's norm tables. Percentile ranks for 1977 and 1978 are shown in Table 1.

Between May 1977 and May 1978, current Grades 4, 7, and 8 students exhibited gains in mean scores on the Reading Vocabulary section of CAT-70 which were sufficient to improve their national percentile rank by at least two percentile points. Only current grade 7 students improved their national percentile rank in Reading Comprehension by at least two percentile points. Students in Grades 5 and 6 in Reading Vocabulary and in Grades 4, 5, 6, and 8 in Reading Comprehension failed to improve their percentile ranks of the previous year.

It should be noted that Grades 2 and 3 were not included in this year's analysis. Moreover, the expected increase of two percentile points for average student scores was a more stringent expectation than previous years. In the past, it was expected that the average student at each grade level would at least maintain the same rank from the previous school year. Current Grade 6 attained the previous year's criteria in both Vocabulary and Comprehension but failed to meet the current year's criteria.

Objective 3: With the assistance of paraprofessionals and a reading specialist teacher, project teachers will implement a system of individualized instruction in basic academic skill areas (reading, language arts, and mathematics) as determined by systematic observations of IEC classrooms with the Learning Environment Checklist. The following criteria will be applied: (a) with respect to classroom grouping arrangements, students will be working in small groups (2 to 10 students) and/or as individuals during at least 80% of observed time; (b) with respect to the level of instructional differentiation, in less than 5% of observed time all students will be working on the same assignment; (c) in at least 40% of observed time the project teachers will be working with individuals and/or small groups (2-10) of students; (d) during at least 25% of observed time paraprofessionals will be working with individual students; and (e) students will be involved with individual activities (self-selected or teacher-directed) during at least 35% of observed time.

This objective was partially attained. Parts a, c, and d were attained; parts b and e were not.

Observations were conducted three times during the school year (October, January, May) using the Learning Environment Checklist to describe the instructional system in project classrooms. Major characteristics included in the checklist were (a) classroom organization (including the number of students in each group), (b) instructional differentiation level, (c) teacher role, (d) paraprofessional activities, (e) student activities, and (f) student attitudes. Twenty-five-minute observation periods were divided into consecutive five-minute intervals during which judgements for each of the six characteristics were recorded.

Findings from the 36 twenty-five-minute observations generally revealed that teachers of observed IEC classes attempted to provide individualized instruction by using effective grouping procedures, teacher-directed and student-selected individual activities, multimedia equipment, and instructional materials.

The following summarizes the observation data: (a) students were working in small groups and/or as individuals during 87% of observed time; (b) all students were working on the same assignment during 7% of observed time; (c) teachers were working with small groups or individuals during 75% of observed time; (d) paraprofessionals were working with individual students during 31% of observed time; and (e) students were working on individual activities (self-selected or teacher-directed) during 28% of observed time.

SUMMARY AND CONCLUSIONS

The Individualized Education Center continues to provide a compensatory program of individualized instruction designed to remediate academic weaknesses of students bussed from different neighborhoods within the Archdiocese of Philadelphia to St. Mary's Interparochial school.

The project was fully implemented according to its intended mode of operation.

The current year's evaluation employed extensive classroom observations, the administration of a standardized achievement test series, and the administration of a basic sight-word vocabulary test.

The project's objectives were partially attained. Results of administering the CAT-70 showed that average gains in reading between May 1977 and May 1978 were sufficient to improve national percentile ranks by at least two percentile points for students in grades 4, 7, and 8 on the Vocabulary subtest and for students in grade 7 on the Reading Comprehension subtest. Moreover, formal observations revealed the successful attainment of 3 of 5 conditions which contribute to a system of individualized instruction.

DISTRICT READING PROJECTS - SECONDARY
(A Component of the COMPREHENSIVE READING PROJECT)

Intensive Reading for Secondary Students provides supplemental small-group instruction in reading for Title I secondary students having reading-skill deficits.

RATIONALE

On standardized tests of basic skills, Title I students tend to score below national norms for their grade level, particularly in reading. The project is based upon the assumption that supplementary reading services and additional instructional periods in reading can ameliorate secondary students' general achievement levels which are low because of their reading difficulties. Additional reading personnel and small-group reading-instruction periods are provided.

EXPECTED OUTCOMES

Participating students (grades 7-12) will show measurable improvement in reading comprehension and vocabulary skills over the 1977-1978 school year.

PREVIOUS FINDINGS

During 1975-1976, 35,000 eligible pupils were served in grades 7-12 by 234 Title I reading teachers who taught at least five periods of remedial reading per day as well as 244 regular teachers who taught at least one Title I class per week. Class sizes averaged 13.7 students in junior/middle schools; 12.8 in senior high schools.

Of students in grades 7-9 who scored below the 16th%ile in 1975-1976, almost half of those attending classes 85% of the time increased their percentile rank; however 40% of those who attended less than 85% also gained in reading.

Results were less positive for students who scored from the 16th-32nd %ile in 1975-1976. Grades 10 and 11 showed more loss than gain.

During the 1976-1977 school year, the three project implementation objectives were attained. Students selected for service on the basis of their 1976 scores received five additional periods of reading instruction per week in the junior/middle, senior and area vocational technical schools (AVT). Grade 12 AVT students received two periods per week of intensive reading as planned. In senior high schools, the schoolwide average enrollment per class was 20 or fewer students; in junior/middle schools 22 or fewer students.

No grade was able to increase three percentile points over 1976 in total Reading on the CAT. Grades 7, 8, 11 and 12 increased two percentile points. Grades 9 and 10 each increased one percentile point.

For all grades, 7,558 students (38%) gained 3 or more percentile points on the total Reading section of the CAT in 1977 compared to 1976.

EVALUATION OF THE CURRENT YEAR

The 1977-1978 evaluation of Intensive Reading for Secondary Students focused upon project implementation and on academic gain. Students who participated in the program during the 1977-1978 school year should increase their average percentile rank by three points.

IMPLEMENTATION

Intensive Reading for Secondary Students supplements the regular Language Skills program in 32 Title I eligible secondary schools. Eligible students are provided with intensive reading instruction in small classes. Ten senior high schools, two secondary area vocational-technical schools (A.V.T.) and 20 junior high/middle schools participated in the program.

In the junior high/middle schools classes not exceeding 22 students received five additional periods of reading a week. In senior/A.V.T. schools classes not exceeding 20 students received five additional reading periods a week. Twelfth grade A.V.T. students received two additional reading periods a week.

Thirty-two Title I secondary schools enrolled 41,265 students in grades 7-12. Not all students in Title I schools were eligible for Title I service. A computer search resulted in the identification of 17,459 students scoring below the 26th percentile in 1977 who had been tested and were eligible for service in 1978. The steps involved in identifying these students are outlined in Table 1.

Examination of school records, interviews with school personnel, and classroom visits revealed that the program was fully operational. Observations in 32 eligible Title I schools revealed that supplementary reading classes were offered by 380 teachers who taught from 5 to 25 periods a week. Of 235 full time (25 class periods a week) teachers of Title I Reading, 174 (74%) were paid from Title I funds; 168 of these 174 (96%) possessed elementary certification. The continued improved adjustment of the elementary certified teacher to assignment at the secondary level was cited again this year by school reading leaders as a positive aspect of the program.

Space allocation for Title I reading classes was another improvement reported by most junior high/middle schools. In 10 junior high/middle schools all teachers of Title I reading were ovserved to have their own classrooms. In eight additional

schools most teachers had their own classrooms and only a few had to float from room to room. In two schools, reading leaders reported that facilities had not improved since last year.

The classroom facilities for Title I Reading in the senior high/A.V.T. varied. Problems of varying severity were observed in nine out of ten schools. In some schools, Title I Reading was observed being taught in large open spaces with or without partitions. In most cases, space allocated for reading was not centralized but spread throughout the building. Under these conditions, reading leaders judged that there was difficulty in coordinating the program due to overcrowding, lack of centralization of reading classrooms, noise, and the difficulty transporting reading materials from room to room by floating teachers.

Most principals, school reading leaders, and English Department chairmen reported that coordination of the reading and English components was accomplished largely through informal relationships among staff, which were good. In over half of the schools, members of the English faculty were reported to have served on the school reading plan committee.

Only nine reading leaders reported that designated time had been set aside for staff development for reading teachers. The reading leaders in 22 schools reported that staff development occurred during department meetings, faculty meetings or common prep time. Staff development was reported to be concerned mostly with routine administrative matters such as ordering materials or review of guidelines.

Eighty-two classroom observations (grades 7-12) in Title I secondary schools revealed that pupils were grouped for reading in four different ways: homogeneously within grade (16 schools), homogeneously across grade (5 schools); hetergeneously within grade (3 schools), heterogeneously across grade (7 schools). Students were observed using a variety of supplementary reading materials which were reflective of the specific skills reading approach of these secondary schools. Twenty-five of the 32 school reading leaders reported that the Title I reading materials were adequate for their pupil's needs. Pupils were working on the development of specific skills in literature, study skills, comprehension and word recognition. In several classes students were observed working on writing assignments such as term papers, book reports or daily logs.

The reading leaders in 26 schools reported using informal or diagnostic instruments to supplement the information available from the CAT and IRI in assessing their pupils. Phonics, comprehension, vocabulary or spelling tests were typical of those used.

Reading leaders and teachers of reading in 20 schools stated that the organization of the math pull out program was a concern this year. Selected Title I eligible

students were rostered out of reading for supplementary math two periods a week. Principals, school reading leaders, and teachers of reading all reported that this affected the continuity of the reading program especially where instruction was geared for whole or small groups rather than individualized.

ATTAINMENT OF OBJECTIVES

Objective 1: The national percentile rank of the mean score of selected Title I students in grades 7-12 participating in the Intensive Reading for Secondary Students Project will increase by three percentile points in each grade as measured by the Total Reading Score of the California Achievement Tests administered in February 1977 and February 1978.

This objective was partially attained.

A total of 17,459 students in grades 7-12 who were eligible for the project in 1977 were tested and had total reading scores in 1978. In comparison to 1977 scores, the percentile rank of the average score for grade 7 students increased by two percentile points.

Grades 8 and 9 both increased by three percentile points. Grades 10, 11, and 12 each gained one percentile point. Thus, this objective was achieved for grades 8 and 9. These data are displayed in Table 2.

Table 3 presents the number and percentage of students served by the project whose scores increased by more than two percentile ranks, decreased by more than two percentile ranks, or remained the same.

For all grades, 7,151 (46.5%) students gained more than two percentile ranks. The greatest success occurred in grade 7 (46.5%), grade 8 (51.5%) and grade 9 (51.1%). The objective was attained in the latter two grades.

Objective 2: Selected Title I eligible A.V.T. students in grades 10 and 11 and comprehensive high school students in grades 10-12 will receive five additional periods of reading per week in classes having an average schoolwide enrollment of 20 or fewer students.

This objective was attained.

Visits to Title I eligible schools and examination of the school roster and reading class lists, as well as classroom observations revealed that selected Title I eligible students were rostered for five additional periods of reading a week. Twenty or fewer students were rostered for these reading classes.

Objective 3: Selected Title I eligible A.V.T. students in grade 12 will receive two additional periods of reading instruction per week in classes having an average schoolwide enrollment of 20 or fewer students.

This objective was attained.

This objective was attained.

Visits to the two A.V.T. high schools and examination of the school roster and individual class lists revealed that selected Title I eligible twelfth grade students were rostered for two additional periods of reading per week. Twenty or fewer students were rostered for these reading classes.

Objective 4: Selected Title I eligible junior/middle school students in grades 7-9 will receive five additional periods of reading instruction per week in classes having an average schoolwide enrollment of 22 or fewer students.

This objective was attained.

Visits to the twenty junior/middle schools, examination of the school roster, examination of the individual class lists, and reading class observations revealed that selected Title I eligible junior/middle students in grades 7-9 were rostered for five additional periods of reading per week. Twenty-two or fewer students were rostered for these reading classes.

SUMMARY AND CONCLUSIONS

This project was fully operational during the entire 1977-1978 school year in ten senior high schools, two A.V.T.'s and twenty junior/middle schools. The Title I reading classes were taught by a total of 380 teachers; 235 taught 25 periods of Title I reading a week and 145 taught at least five periods a week.

There were four programs objectives. The three pertaining to program implementation were fully attained. The performance objective was partially attained. The percentile rank of the average score increased in all six grades from 1977 to 1978.

Most implementation problems encountered during the initial two years of the project have been resolved or alleviated. These problems related to double scheduling, student cutting, coordination between the English and reading components, and adjustment of the elementary certified teacher to secondary school assignment.

About one-half of the school reading leaders reported that they served either formally on the school roster committee or offered informal advice on the rostering of eligible Title I students. About one-half of the schools also reported that a representative from the English department served on the schools Reading Plan Committee.

Eighty-two classroom visits revealed that a specific skills reading approach was used in all schools. Teachers, however, used diversified grouping patterns and curricular materials. Eighty percent of the schools reported the practice of using diagnostic instruments other than the CAT and Informal Reading Inventory for additional assessment of their eligible Title I students. Many school reading leaders reported that this practice had increased in the past year.

Concern was expressed by the reading leaders in many schools about three aspects of the program. These were the lack of designated time for staff development, the practice of removing pupils from Title I reading to receive Title I math services, and the availability of adequate classroom facilities in senior high schools.

Table 1

Steps Involved in Identifying Students Served by the Project

Step	How Determined	Number of Students
1. Determine students on roll in 32 Title I eligible schools and grades, February 1978.	Extraction of 1978 CAT Test Tape	41,265
2. Determine students tested in February 1977 with a National Percentile Rank of less than 26 in Total Reading in eligible schools and grades.	Extraction of 1977 CAT Test Tape	42,817
3. Determine grade six students with a National Percentile Rank of less than 26 in all schools and grades.	Extraction of 1977 CAT Test Tape	3,372
4. Delete any student with a 1977 score of greater than the 25th percentile in Total Reading.	Computer Sort	19,479
5. Include only those students having both 1977 and 1978 Total Reading Score.	Computer Program	17,459
6. Compute means for eligible students with 1978 Total Reading Scores.	Computer Program	17,459

Table 2

Average* Percentile Rank Differences by Grade from 1977 to 1978
CAT Total Reading Score for Participants in Intensive
Reading for Secondary Students Project

Grade	1977 N	Percentile Rank of the Average Scale Score 1977	Grade	1978 N	Percentile Rank of the Average Scale Score 1978	Difference in Percentile 1977-1978
6	3,372	10	7	3,080	12	+2
7	3,277	11	8	3,086	14	+3
8	3,808	10	9	3,047	13	+3
9	3,659	8	10	2,925	9	+1
10	3,624	6	11	2,721	7	+1
11	2,910	8	12	2,600	9	+1

*Percentile ranks cannct be averaged. Achievement development scale scores (ADSS) were averaged by grade for 1977 and 1978. The average ADSS per grade was then converted to the closest corresponding percentile rank.

Table 3

Number and Percentage of Students Served by Intensive Reading for Secondary Students whose 1978 CAT Total Reading Scores Decreased by More than Two, Increased by More than Two or Remained the Same from 1977

1978 Grade	Number Tested*	Decreased N	Decreased %	Same N	Same %	Increased N	Increased %
7	3,080	950	30.8	698	22.7	1,432	46.5
8	3,086	763	24.7	734	23.8	1,589	51.5
9	3,047	705	23.1	785	25.8	1,557	51.1
10	2,925	968	33.1	1,078	36.9	879	30.0
11	2,721	1,295	47.6	836	30.7	590	21.7
12	2,600	583	22.4	913	35.1	1,104	42.5
Total	17,459	5,264	30.1	5,044	28.9	7,151	41.0

*The number tested represents those students for whom Total Reading Scores were available for 1977 and 1978.

OPERATION INDIVIDUAL
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Operation Individual is designed to help underachieving 9th and 10th graders develop competence in basic academic skills.

RATIONALE

The project operates on the assumption that the underachievement of Title-I-eligible students is attributable to their deficiency in basic skills, and inadequate study skills. On standardized tests of basic skills, they tend to score below national norms, particularly in reading. They also have difficulty in coping with the demands of high school curricula and tend to develop patterns of chronic underachievement. The project is designed to provide these students with increased supervision and individualization of instruction to improve their chances of academic success.

EXPECTED OUTCOMES

By participating in the project, students should develop competence in reading.

PREVIOUS FINDINGS

Objectives for student progress on tests of reading and reference skills, and on teachers' ratings of academic skills and responsibilities, have been attained where students have received the project's supportive service in reading classes only. Where the project has provided intensive service with additional aides in mathematics, English, and social studies classrooms, academic skill ratings in the subjects exceeded expectations, but test results and responsibility ratings fell short of the project's objectives.

EVALUATION OF THE CURRENT YEAR

The current year's evaluation of Operation Individual focused on participants' gains in reading-comprehension as measured by standardized tests.

IMPLEMENTATION

During the 1977-1978 school year Operation Individual provided services to Title-I-eligible pupils in five nonpublic high schools in a manner generally consistent with the Title I Application.

The project offered supportive and/or intensive reading services to its recipients. Those receiving only supportive reading service had daily reading instruction either directly from a reading teacher or from an aide who was supervised by a reading teacher. Students receiving intensive reading service had similar daily instruction in reading plus classes in mathematics, science, English, and social studies where each subject teacher was assisted by a professional. The main features of the project's implementation in each participating school are summarized in Table 1. It should be noted that even though intensive service was rostered only in two schools, conversations and observations in the other participating schools revealed that the subject area teachers were in contact with the Operation Individual reading teacher for instructional advice and material selection.

Participation in the program was based on the results of low reading scores as measured by the Educational Development Series of the Scholastic Testing Service and/or low academic achievement as indicated by school records.

The evaluation team visited each participating school beginning in October. The team conferred (1) with the reading teachers, aides, and each school's administrative personnel; (2) observed project classes ; (3) attended in-service sessions for the newly introduced developmental reading program; and (4) interpreted pretest - posttest results.

ATTAINMENT OF OBJECTIVES

Objective 1: The average reading-comprehension score for all participating students on the Stanford Diagnostic Reading Test/Stanford Achievement Test will show at least a month-for-month gain (e.g., at least 0.7 GE in 7 months) from autumn pretest to spring posttest.

This objective was not attained.

Participants were tested with the Stanford Diagnostic Test, Brown Level in October 1977 and with the Reading Comprehension subtest of the Stanford Achievement Test, Advanced Levels in May 1978. The gains during the 7 months between tests are summarized in Table 2.

The average reading score for all participating students did not show a month-for-month gain. The combined gain for the 9th- and 10th-grade students was .25 GE in a seven-month period.

For the 9th-grade participants the average month-for-month gain was .4 GE; for the 10th-grade participants the month-for-month gain was -.1 GE.

Although the month-for-month gain was not attained on the average, it was attained by some groups. (See Table 2.)

Although these tests were validated for use as a pre-post measure by the publisher, it is possible that the lack of attainment was due to: (1) inappropriate selection of test levels for administration, (2) the norming sample being unrepresentative of Philadelphia students, and/or (3) the appropriateness of materials covered in a class in relation to the achievement measure.

SUMMARY AND CONCLUSIONS

The project's operation was consistent with the Title I Application, although specific implementation differed among the five participating schools.

Test results for the average student in the project fell short of the stated objective, and the average 9th-grade student showed a greater gain than the average 10th-grade student (0.4 vs -0.1).

The lack of attainment of the stated objective may have been due to the inappropriateness of the test levels selected, the lack of comparability between the project participants and the norming population, and/or the lack of congruence of the instructional materials and the achievement measure. Analysis seems to indicate, however, that the lack of congruence between instructional materials and the achievement measure may be the primary reason for the objective not being attained. Immediate attention is being given to the selection of a more appropriate measure of reading achievement.

PRIMARY READING SKILLS CENTERS
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Primary Reading Skills Centers project provides remedial reading instruction to primary-grade children with deficiencies in reading skills.

RATIONALE

The participating pupils have failed to master basic reading skills and, therefore, are reading below grade level. The project is based upon the assumption that supplementary services can ameliorate low academic achievement resulting from reading difficulties. Services are provided to improve the comprehension and word-attack skills of the participating pupils.

EXPECTED OUTCOMES

It is expected that, through participation in the project, pupils will improve in reading-comprehension and word-attack skills.

PREVIOUS FINDINGS

Previous evaluations consistently indicated that project participants demonstrated gains in reading ability. From 1969 to 1975 at least 67% of the participating pupils met or exceeded the goal of gaining two instructional book levels per year, as measured by a group informal reading inventory, and there was a substantial increase from pretest to posttest in the percentage of pupils attaining mastery on the Botel Phonics Inventory.

In 1975-1976 the instructional reading levels of 56% of the project pupils increased at least two book levels in a year; the expected 90% increased at least one book level during the same period. The criterion for phonics mastery (a 20-point gain in the percentage of pupils achieving mastery) was exceeded by 26 percentage points. The alphabet-recognition criterion was met by 63% (not the expected 95%) of the first-grade pupils.

In 1976-1977 the criterion for phonics mastery (a 20-point gain in the percentage of pupils achieving mastery) was exceeded by eight percentage points. The instructional reading levels of 71% (not the expected 90%) of the project

pupils increased at least one book level during the year; 15% (not the expected 60%) increased at least two book levels during the same period. The alphabet-recognition mastery criterion was met by 81% (not the expected 95%) of the first grade children.

EVALUATION OF THE CURRENT YEAR

This year's evaluation of the Primary Reading Skills Centers project focused on the degree to which participating pupils (a) improved in reading comprehension, as measured by a group informal reading inventory, (b) developed their word-attack skills, as measured by the Botel Phonics Inventory, and (c) developed their alphabet-recognition skills, as measured by an alphabet-recognition test in first grade.

IMPLEMENTATION

The intended mode of operation was fully implemented in each of the two centers involved with this project. The centers were housed in non-public school sites and served non-public school children. Each of the teachers was assisted by an aide. At one site, pupils in grades one to four were served, in the other, pupils in grades two to four were served. Pupils were selected based upon their scores on the Scholastic Testing Service (STS) test, reading inventories and phonics inventories, as well as their teachers' recommendations.

The center teachers reported that pupils tended to have most difficulty with word attack skills and with more complex skills of sentence and paragraph comprehension (inference, meaning in context, etc.). Teachers reported that they communicated with the regular teachers to indicate the nature of pupil problems and to report progress.

The project is organized as a "pull-out" program in which the children attend four to five times a week for periods that range from 45 minutes to an hour. The teachers worked with small groups and individual pupils most of the time. The aides spent most their time assisting with the instructional program.

The centers served 20-25 children during the instructional periods. Groupings depended upon the purpose of the lesson, but usually pupils were grouped homogeneously by skill level. Because of scheduling, most groups were of the same grade level. A survey of equipment and materials indicated that each site appeared to have ample supplies to meet the varied needs of the pupils.

The two center teachers attended the staff development sessions provided by the Reading Skills Centers Project, another Title I funded project. At these meetings, concerns were discussed, techniques and materials introduced, and the latest findings reviewed.

ATTAINMENT OF OBJECTIVES

Objective 1: All participating pupils in first grade will develop their alphabet recognition skills to the extent that they will achieve an average score of at least 50 on a 52-item Alphabet-Recognition Test administered in May.

This objective was not attained. A teacher-scored alphabet test was administered to the 24 participating first grade children. The pupils achieved a mean raw score of 46.5 on the 52-item test. The criterion of 50 items correct was attained by 21 (87.5%) of the 24 pupils. It is the evaluators' opinion that the expectation for this objective was excessive.

Based upon this criterion, a child who has difficulty with more than one letter cannot achieve this objective. The high proportion of pupils who scored at least 50 on this test is indicative of the project's success.

Objective 2: All participating pupils in grades 2-4 will demonstrate gains in reading achievement to the extent that on the average they will gain at least two book levels between September pretest and May posttest on a group informal reading inventory (IRI).

This objective is considered attained. Informal reading inventories were used by the teachers to assess the decoding and comprehension skills of each of the participating pupils in grades 2-4. It was found that 52 pupils, more than half, had gained the reading skills of two or more instructional book levels. Only one book level was gained by 24 pupils and 10 of the total of 86 made no gains.

The administration of informal inventories to groups usually involves having each child read a passage selected by the teacher and then being asked factual, inferential, vocabulary, and evaluative questions related to the passage that was read. The teacher judges the quality of the answers and marks the pupils accordingly.

SUMMARY AND CONCLUSIONS

Once again the Primary Skills Program has provided needed services to pupils in grades one to four having weak skills in reading. Pupils learned needed alphabet skills, phonics skills, and comprehension skills. Twenty-one of 24 first grade pupils attained a score of 50 items or more in a 52-item alphabet test. Based on a phonics test, 41% of the participating Title I pupils in second to fourth grades had achieved an 80% mastery level, and 60% of the group had progressed through the skills of two instructional book levels. Thus, the project was successful in improving pupils' skills in the areas that were evaluated.

READING IMPROVEMENT THROUGH TEACHER EDUCATION
(ESEA TITLE I COMPONENT)
(A Component of the COMPREHENSIVE READING PROJECT)

The RITE project is designed to help train urban elementary school teachers to diagnose reading problems and to design and implement effective developmental reading programs. Teachers practice new techniques in their classrooms; on-site follow-up is provided by the project staff.

RATIONALE

The reading and language-arts deficiencies of Title I children are well documented. In order to help these children become successful learners, teachers should have a wide range of experience with various reading techniques and materials. Because many teachers lack this experience, the project supplements their preservice training with in-service training programs specifically designed to meet the reading needs of teachers of urban school children.

EXPECTED OUTCOMES

With the help of service contacts by the project specialists, teachers should develop competence in using the Directed Reading Activity (DRA) approach, in diagnosing the individual pupil's reading needs, in prescribing independent activities for the pupil, and in utilizing efficient classroom-management techniques.

Also, kindergarten pupils, guided by RITE-trained teachers, should improve the psychomotor developmental tasks that are prerequisites for reading readiness.

PREVIOUS FINDINGS

Evaluation of RITE during its first year of operation was formative and focused on the implementation of services. Project records indicated that RITE was delivering the types of services which should improve teachers' skill in reading instruction. Principals' ratings of the specialists and the project as a whole indicated satisfaction with their effectiveness.

Subsequent evaluations focused on the effect of RITE services on specific teacher competencies. Results of observations, the RITE Case Study, and the RITE Teacher Rating Scale indicated that teachers receiving these services were managing their reading lessons effectively and seemed able to make use of test results in teaching reading. With beginning teachers, the project's greatest success was in DRA implementation and reading-lesson management. There was also evidence of success in developing the beginning teachers' skills in diagnosing and prescribing and in providing varied and individualized independent reading activities.

EVALUATION OF THE CURRENT YEAR

Tnis year's evaluation of the RITE project examined the effect of the project's services on specific teacher competencies by spring administration of formal assessment measures (observational instrumerits) to teachers at all grade levels. Kindergarten pupil achievement was assessed by administration of the Santa Clara Inventory of Developmental Tasks. Also Contact Frequency Reports provided data on the number of observations, demonstrations, and conferences held by staff members.

IMPLEMENTATION

The project's planned mode of operation was fully implemented.

In Contact Frequency Reports submitted at regular intervals the six RITE elementary school consultants reported they had made 755 half-day visits to 32 participating schools from October 1977 to April 1978. In individual classroom visits, staffers gave 749 teaching demonstrations. They also held 1,159 conferences with principals, school reading coordinators, and other school administrators. On 309 occasions they observed project teachers working in their classrooms. Project staff also provided personal consultation sessions tailored to the needs of individual teachers on 1,857 occasions. Reading problem diagnosis and remediation was the focus during most sessions.

RITE elementary consultants, in an effort to provide service to new teachers, made 646 visits to 26 beginning teachers in project schools. These made up 22% of the individual teacher contacts, with consultants averaging 24.8 visits to each teacher for the school year.

During their visits, RITE staff placed the greatest emphasis on reading approaches and skills, reading organization and management, reading problem diagnosis and prescription, and independent reading activities. Project staff also provided individualized consultation sessions to meet the disparate interests and needs of classroom teachers.

Two new teachers' seminars, 16 on-site school workshops, two coordinators' workshops, and three cluster workshops conducted by the elementary consultants served participants from 23 schools.

The two RITE kindergarten specialists introduced new techniques for enhancing pupils' reading readiness skills during 325 half-day visits to 23 kindergarten teachers. In order to meet individual teacher needs, project staff tailored consultation sessions to meet differing teacher desires.

RITE staff gave assistance to teachers during conferences, demonstrations, and observations. The following categories were covered during these contacts:

listening and language skills (45%), diagnosis and prescription (11%), grouping (7%), room arrangement (4%), visual displays (4%), curriculum planning (19%), classroom routines (6%), and use of paraprofessional help (4%). Seven workshops for kindergarten teachers were conducted by the RITE consultants.

A RITE consultant, specially assigned to work on secondary school reading programs, completed 134 half-day visits to teachers in five project high schools. Through 311 individual conferences, 17 demonstrations, and 24 observations, the consultant gave individualized help to high school teachers. She also distributed specially designed reading materials.

The secondary RITE consultant also provided group services, including two workshops for secondary reading/English teachers and seven workshops for reading aides. In addition the consultant held 55 conferences with principals; 31 with department heads; and 79 with studies directors, counselors, improvement-of-reading teachers, and librarians. Generally, the consultant acted as a resource to help organize high school reading programs and help set reading program priorities.

ATTAINMENT OF OBJECTIVES

Objective 1: During the current school year, the RITE staff will provide 3,000 individual service contacts to elementary and secondary teachers in the areas of: reading approaches, diagnosis and prescription, varied independent activities, and reading lesson organization and management. A service contact is defined as a scheduled conference, an observation, or a demonstration. Project staff will complete Contact Frequency Reports every two (2) months.

This objective was attained.

Detailed Contact Frequency Reports were completed every two months by project staff. They indicated that there were 3,267 individual service contacts to teachers from September 1977 to April 1978. Areas covered by contacts included reading approaches (45%), diagnosis and presciprtion (17%), varied independent activities (13%), and reading lesson organization and management (25%).

The exceeding of the criterion number of individual service contacts by the project staff demonstrated a continuous and intense interaction of staff and participants. Also, all skill areas targeted by the staff for intensive work were covered.

Objective 2: Teachers (K-12) new to the RITE Project will improve their instructional skills so that they are able to: (a) diagnose and prescribe for individual pupil needs, (b) provide useful and varied activities for extending children's listening and language skills, and (c) organize and manage their classroom reading program effectively to the extent that, on the average, participating teachers will demonstrate specific levels of assimilation of each of the above sections as measured by the RITE Observational System.

This objective was attained.

Ten kindergarten teachers, designated for high priority services because of their high need for and interest in learning new skills, were rated by the evaluator on their assimilation of special instructional methods. Rated on the 24-item Kindergarten Observational Rating Scale, these teachers achieved an average score of 30.5, exceeding the mastery criterion score of 24 by 6.5 points.

Of 23 selected high priority elementary teachers, ten were randomly chosen to be rated on the 28-item Elementary Observational Rating Scale. Each item was scored from 0 to 2 points making the maximum possible score for the Scale 56. The teachers achieved an average score of 32, exceeding by four points the mastery criterion score of 28 (set by RITE staff).

In addition, the evaluator rated four out of five high priority high school teachers on the 19-item Secondary Observational Rating Scale. The maximum number of points which could be achieved for each item was two points, so that the maximum scale score was 38 points. Project teachers averaged 33.5 on the scale, exceeding by 14.5 points the mastery criterion score of 19 points (set by the RITE consultants).

These results showed that RITE project teachers at all grade levels improved their reading instructional abilities. They demonstrated assimilation of skills needed to diagnose and prescribe for pupils' reading and reading-readiness needs. They also showed skill in creating attention-getting, listening, and language skills activities and in efficiently managing their classroom reading programs.

Objective 3: Participating kindergarten children will improve their developmental skills so that by May 1978 60% of the children will show mastery of 80% of Level 5-5½ Skills and 80% of the children will show mastery of 100% of the Pre-School Skills, as measured by the Santa Clara Inventory of Developmental Tasks.

This objective was attained.

Kindergarten pupils of teachers receiving regular RITE staff services were scored on the Santa Clara Inventory of Developmental Tasks. The scores of a 26% random sample (66 pupils) of 246 pupils were selected for analysis. Ninety-four percent of the children mastered 80% or more of the Level 5-5½ Skills on the Santa Clara. Some 5-5½ Skills included assigning number values, describing simple objects, repeating a tapping sequence, etc. Eighty-eight percent mastered 100% of the pre-school Skills on the Inventory. Some visual memory pre-school skills included recalling animal pictures, naming objects from memory, and recalling a 3-color sequence.

SUMMARY AND CONCLUSIONS

The RITE project's intended mode of operation was fully implemented. In its elementary school component, RITE specialists helped principals and reading coordinators to organize and implement their schools' reading programs. They also used workshops and individual consultations for elementary school teachers to provide ongoing in-service training in reading instruction.

Workshops, meetings, and individual service contacts were the main modes through which kindergarten specialists provided training. These training activities focused on helping teachers enhance pupils' reading readiness skills.

As a prelude to teacher training, a RITE secondary school specialist met with school administrators to establish and refine reading program priorities. The specialist then proceeded to consult with individuals and groups of teachers on techniques of reading instruction. Five project high schools participated in this consultation.

Contact Frequency Reports revealed the RITE specialists completed 3,267 individual service contacts to secondary and elementary school teachers concerning specific methods of reading readiness skills.

Using a series of specially designed observational checklists, systematic observations were made of new participants in the RITE project as they taught in their classrooms. Kindergarten, elementary, and secondary teachers who received high-priority, intensive training were included. Checklist results showed the project successfully helped teachers (a) diagnose and prescribe for reading and reading readiness needs, (b) create activities to extend pupils' listening and langauge skills, and (c) organize and manage classroom reading programs.

Kindergarten teachers participating in the project administered the Santa Clara Inventory of Developmental tasks as a diagnostic and prescriptive instrument. A 26 percent sample of scores indicated that pupils of RITE teachers had improved their developmental skills that by year's end 94% of the children had mastered 80% or more of Level 5-5½ Skills and 88% had mastered 100% of th preschool Skills.

Generally, the RITE project resulted in measurable improvements in teaching behaviors such as reading problems diagnosis and remediation of project participants as determined by systematic observations with the use of an observational checklist. The behavioral changes appeared largely in the areas of approaches to teaching reading, diagnosis of and prescription for reading problems, creation of independent pupil activities, and classroom organization and management. The RITE project continued, as in past years, to meet its goals of fostering ongoing improvement in participants' teaching skills in the areas of reading and reading-readiness instruction.

SUMMER READING READINESS
(A Component of the COMPREHENSIVE READING PROJECT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Summer Reading Readiness project is designed to provide formal learning experiences for two groups of children: (a) children about to enter the first grade, and (b) children who have completed the first grade with less-than-satisfactory academic achievement. The project attempts to strengthen in these children those readiness skills required for success in the relatively structured primary-grade reading program.

RATIONALE

Kindergarten-age children lack the readiness skills prerequisite to success in school because of a limited experiential background. Their limited cognitive skills and concept development require expansion and enrichment for successful transition into the reading program in Year 1. Many children who have completed Year 1 have weaknesses in specific decoding skills which require development to prevent a further deterioration in their achievement levels in Year 2.

EXPECTED OUTCOMES

The primary goal of the project is to provide appropriate learning experiences designed to develop a stable foundation of readiness skills for children entering the first grade of formal schooling. A second goal is the remediation of reading-readiness deficiencies of children who have had unsuccessful first-grade experience.

PREVIOUS FINDINGS

During the summer of 1972, participating children who attended with regularity made significant improvement in reading-readiness and basic reading skills. Follow-up interviews with teachers revealed that participating children differed from non-participating children in achievement levels and classroom performance in Year 1.

During the summer of 1973, the difference between mean pretest and posttest scores on the Philadelphia Readiness Test was statistically significant, indicating that the objective of developing readiness skills of pre-first-grade children had been attained.

The 1974 evaluation focused upon the development of aural comprehension skills in pre-first-year pupils and the strengthening of reading-readiness skills

in underachieving first-year pupils. The expected proportion of pupils attaining mastery was not reached by either group. The appropriateness of the criteria of success and the reasonableness of the expected proportions of pupils attaining mastery were questioned. Subsequently, the objectives were revised. In 1975 and 1976, these objectives were attained. In 1977, using a revised data collection format, the objective dealing with underachieving first-year pupils was not attained.

EVALUATION OF THE CURRENT YEAR

This year, evaluation of the Summer Reading Readiness project again focused upon the development of aural comprehension skills in pre-first-year pupils, and upon the strengthening of reading-readiness skills in pupils who were not successful in their first-year experience.

IMPLEMENTATION

The Summer Reading Readiness project was fully implemented in harmony with the Title I Application.

With the exception of a first-day training session for the teachers and the July 4 holiday, the project directly served eligible children five mornings a week for six weeks. Highest priority for participation was given to children without first-grade experience; second priority was given to children who had had less-than-successful experience in first grade.

Children were typically reported in three classroom groups per school, each group having its own teacher and generally including children of only one priority classification; six of the schools had six groups each instead of three. At some schools, older elementary-grade pupils served as voluntary helpers.

ATTAINMENT OF OBJECTIVES

Objective 1: At the conclusion of the six-week project term, at least 60% of the pre-first-grade pupils who attend at least 75% of the project sessions will have acquired skills in aural comprehension (such as abilities to pay attention to, organize, infer from, and retain what has been heard) as indicated by the attainment of a score of at least 18 correct items out of 28 on Part 4, Aural Comprehension, of the Stanford Early School Achievement Test (SESAT).

This objective was fully attained.

Only Part 4, Aural Comprehension, of SESAT was administered to Priority 1 pupils by their teachers during the final week of the project.

SESAT results for the Priority 1 pupils are shown in the second column of Table 1. Six children, although they were present at least 21 of the 28 days, had no Part 4 scores reported, possibly because of absence on the testing day. Of the 619 pupils who were present at least 21 days and had Part 4 scores, 65.3% had scores of at least 18 correct items. This percentage surpassed the minimum expectation of 60%. Of the 36 schools, 23 met or exceeded the 60% success rate.

Objective 2a: At the conclusion of the six-week project term, at least 60% of the underachieving first-grade pupils who attend at least 75% of the project sessions will have improved their basic reading-readiness skills to the extent indicated by mastery of consonants and vowels specified for their respective entry levels, such mastery recorded on the project's Diagnostic Profile.

This objective was not attained.

The Diagnostic Profile consisted of 74 elements (single consonants or vowels in various contexts) grouped to comprise 5 developmental levels. In May, the first-grade teacher circled the elements the pupil had not yet mastered; in the final week of the project, the child's summer teacher checked (on the same form) the elements that were mastered since the May circling. For the summer, entry level was defined as the lowest level in which the child had not mastered (in May) at least 85% of the elements. Expected growth during the summer was on a sliding scale keyed to the individual's entry level.

Results on the Diagnostic Profile for the Priority 2 pupils are shown in the third column of Table 1. Sixty-four children, although they were present at least 21 days, had no usable profiles, because either they were absent on a testing day, the May profiles were incomplete, or the summer teacher did not follow directions on the profile.

Of the 206 pupils who were present at least 21 days and had usable Diagnostic Profiles, 52% made the amount of progress specified for their respective entry levels. This percentage fell short of the minimum expectation of 60%. Of the 28 schools that submitted usable profiles, 12 had success rates of at least 60%.

Of the 25 pupils who entered the project at Level 1, 28% succeeded; of the 41 at Level 2, 39% succeeded; of the 40 at Level 3, 58% succeeded; of the 62 at Level 4, 65% succeeded; and of the 31 at Level 5, 80% succeeded in making the gain specified for their level.

Objective 2b: At the conclusion of the six-week project term, at least 60% of the underachieving first-grade pupils who attend at least 75% of the project sessions will have improved their basic reading-readiness skills to the extent indicated by recognition of at least 15 new words (or mastery of the entire list) on the Sight Word List.

This objective was fully attained.

The Sight Word List consisted of 60 preprimer and primer words to be presented on flash cards for immediate recognition (pronunciation) by the pupil. In May, the first-grade teacher circled the words the pupil had not yet mastered; in the final week of the project, the child's summer teacher checked (on the same form) the words that were mastered since the May circling. Pupils who had 15 or more words circled (unmastered) in May were expected to have at least 15 of those words checked (mastered) at the end of their project experience; pupils with less than 15 words circled were expected to master all of them.

Results on the Sight Word List for the Priority 2 pupils are shown in the last column of Table 1. Twenty-three children, although they were present at least 21 days, had no usable word lists, because either they were absent on a testing day, the May forms were incomplete, the summer teacher did not follow directions on the form, or the school used a list of words that differed from the regular Sight Word List.

Of the 247 pupils who were present at least 21 days and had usable Sight Word Lists, 68% made the specified amount of progress. This percentage surpassed the minimum expectation of 60%. Of the 29 schools that submitted usable word lists, 19 had success rates of at least 60%.

Of the 136 pupils who entered the project with at least 15 words circled, 65% succeeded; of the 99 with fewer than 15 words circled, 69% succeeded.

SUMMARY AND CONCLUSIONS

Fully implemented in a manner consistent with the Title I Application, the Summer Reading Readiness project enabled 823 pre-first-grade children and 454 low-achieving first graders to participate in its six-week program at 36 nonpublic schools. Well-planned educational "fun and games" combined with occasional more formal learning exercises were designed to enhance the children's readiness for the learning tasks of the first or second grade they would enter in September.

The project attained its stated objective for the pre-first-grade children, and one of its two objectives for the low-achieving first graders. Each objective expected 60% of the pupils to meet its respective criterion. Of the preschoolers who attended at least three fourths of the project sessions and took the SESAT Aural Comprehension subtest, 65% earned the specified score of at least 18 correct items. Of the pupils with first-grade experience who attended at least three fourths of the project sessions and were rated on the project's Diagnostic Profile and/or its Sight Word List, 68% made the specified gains in word recognition and 52% did so in the mastery of single consonants and vowels in various contexts. Thus, many children were able to enter the new school year with improved reading and readiness skills after their summer experience in this project.

TABLE 1

PUPIL PARTICIPATION AND SUCCESS IN 1978
SUMMER READING READINESS PROJECT

Item	Pre-First-Grade Pupils (Priority 1)	Post-First-Grade Pupils (Priority 2)	
No. of Pupils Preregistered	N/A	N/A	
No. Present at Least Once	823	454	
No. Present at Least 21 Days	625	270	
Applicable Objective	1	2	3
Evaluation Instrument	SESAT, Part 4	Diagnostic Profile	Sight Word List
No. of 21-Day Pupils Tested	619	206	247
No. Who Met Criterion	404	107	167
% Who Met Criterion	65%	52%	68%
At Least 60%?	Yes	No	Yes
No. of Schools at Least 60%	23 of 36	12 of 28	19 of 29

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COMPUTER MANAGED INSTRUCTION

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Computer-managed instruction (CMI) facilitates individualized competency-based instruction in reading and mathematics by applying computer technology to instructional management (diagnosis of needs, prescriptions for instruction, and frequent progress assessments) and to actual instruction at a computer terminal.

RATIONALE

The underlying philosophy of CMI recognizes the importance of individual differences in providing experiences which enable development of each individual's potential. Educators generally agree that when unique experiences are provided for each pupil, the chances of school success are enhanced. This approach has not been adopted widely because of the difficulties encountered when more than a few pupils receive instruction. Among the problems that must be overcome to implement an individualized program are management of the assorted instructional materials, the extensive variety of possible prescriptions, and the record of performance for each pupil. Computer technology provides both the structure and the flexibility to overcome these difficulties of individualization within a mass-education system.

EXPECTED OUTCOMES

The goal of the project is to raise the achievement of participating pupils in reading to a higher level than would normally be expected in the schools. It is expected that a high proportion of pupils will show mastery of the respective skills as they move through the instructional sequences.

Staff-development sessions and frequent classroom visits by the CMI curriculum specialists are expected to assist participating teachers in individualizing instruction in their classrooms.

PREVIOUS FINDINGS

Past evaluations of the three predecessor projects (Computer-Assisted Instruction, Instructional Management, and Teaching Basic Reading Skills--A Systems Approach) generally showed that, where the projects were appropriately implemented, participating pupils had significantly greater achievement than comparison pupils. The evaluations documented that the individualized activities did provide learning experiences which the pupils were able to master at desired rates, as indicated by both the projects' internal monitoring systems and external criterion tests.

Teachers' and pupils' attitudes toward the projects were found to be positive. In general, teachers viewed the computer as an excellent motivational device which enabled their pupils to succeed in formal learning. Also, the teachers felt that without the computer's record keeping and scheduling, individualization of instruction would not be possible in their classrooms.

EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the CMI project examined four components: a reading skills center program, a math drill and practice program, beginning reading, and an instructional management program.

IMPLEMENTATION

In 1977-1978, three of the four components of the project were fully implemented.

The reading skills program operated in 14 schools; one or two computer terminals in each school were tied to the central processor at 5th and Luxerne Streets. In the typical school, teachers selected students for computer-based reading instruction in order to provide them with extra motivation as well as more intensive individualized instruction. The instructional programs, used with off-line activities for reading comprehension and decoding, were accessed for a total of 2,503 hours of "connect time" between October and April.

A math drill and practice program was in full-time operation at five terminals in one junior high school and in part-time use at six middle schools and one high school. Individualized instruction was provided pupils in several areas of math by means of a program included with the Hewlett-Packard Computer System.

The beginning reading program, Project SABRE, was in operation on 15 terminals in two schools for only a portion of the school year. Personnel cutbacks and installation delays postponed the start-up until April, 1978. Since then, elementary students have been using the high-technology program, which includes audio-cassettes and cathode-ray terminal instruction in reading.

The Instructional Management Program offered remedial instruction in communications arts, math, science, and social studies to pupils in two middle schools.

ATTAINMENT OF OBJECTIVES

Objective 1: Reading Skills Center pupils will show mastery on 70% of the reading comprehension posttests on topics completed.

This objective was attained.

Over 93% of the reading comprehension posttests were mastered in each of the 17 specified areas of comprehension. A total of 718 primary students completed the instruction and related remediation in 305 topics. Of 305 posttests, 284 were successfully completed.

Objective 2: Participating primary pupils will improve in the fundamentals of arithmetic as demonstrated by completion, on average, of 15 units of Drill and Practice Math as indicated by computer-given block tests.

This objective was attained.

The 96 participating students completed an average (mean) of 31 blocks of material. These blocks were arranged in sequences similar to the chapters of a book, each containing 10 to 20 problems. The problems represented several levels of difficulty in mathematical operations.

Objective 3: Project SABRE participants will improve in reading skills as measured by group informal reading inventories administered in November and June.

The attainment of this objective could not be determined.

Because of budget constraints in the targeted schools, proctors were not available for the in-school computer facility. A nonprofessional aide was obtained in time to begin the program in April.

Objective 4: The CMI project will demonstrate cost-effectiveness as determined by a comparison of the technology-band system with a traditional labor-intensive classroom.

This objective was attained.

A unit of CMI output, the effective instructional hour, was defined to measure the amount of time-on-task which was controlled by the computer system. The effective amount of instruction is represented by "Hours Adjusted for Off-Line CMI Activity" in Table 1. The costs of the CMI system, amortized over 10 years, is given in Table 2, while a further breakdown of curriculum-development costs appears in Table 3.

The hourly cost was then computed by dividing the total systems' costs of Table 2 by the adjusted hours total of Table 1. When the total "minimum adjusted hours" are used, the total system cost of $.40 represents an upper bound of cost per instructiona hour. The lower bound of systems' cost can be found by using the "maximum adjusted hours" column of Table 1; this amounts to $.08 per instructional hour. This current range of CMI costs ($.08 to $.40) was compared to a median labor cost of $.50 per instructional hour. The labor cost reflects the cost of one teacher and one aide for a class of 60 students.

The annual cost per student of the CMI system in 1976-1977 was $35.09. This makes the use of a technolgoy-based system lower than that of alternative media which have bee proposed for instruction of the disadvantaged.

SUMMARY AND CONCLUSIONS

All objectives were attained in all operational programs. The components which were fully implemented serviced Title I participants at a high level of instructional efficiency.

In addition to its efficiency, the CMI project was shown to be a low-cost medium of mass instruction when initially high development and installation costs are amortzied over the school life of the project. The growing acceptance of the use of the computer has not always been accompanied by recognition of such cost savings. Through the reorganization of the school, technology-based instruction provides a cost-effective delivery system for instruction.

EDUCATION IN WORLD AFFAIRS

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Education in World Affairs is a project that promotes knowledge and understanding of current world affairs and of topics related to interdependence. Guest speakers, trips, materials, and conferences are provided for students in Grade 6 and in junior and senior high school.

RATIONALE

Children should have the opportunity to acquire understandings of the world which go beyond family and local events. Target children have few opportunities to meet people from other nations and learn firsthand of their history, culture, and mores. Although books, booklets, and visual materials are used, the project emphasizes a direct, personal learning approach involving classroom visitations by foreign students, structured visits to cultural or historical centers, and carefully planned conferences which allow the children to meet and discuss issues of interest. Thus the project offers educational experiences not normally available in the regular classroom program of most inner-city schools.

EXPECTED OUTCOMES

It is expected that meetings with foreign students, visits to sites of interest, and discussions with peers will encourage curiosity, stimulate new interests, inculcate new knowledge, and build respect for other cultures and races. Students should learn about other people: what life is like in other countries, how clothing and shelter relate to climate and customs, and how the lives and problems of people the world over are similar and interrelated.

PREVIOUS FINDINGS

From 1966 through 1970, project students demonstrated significantly greater knowledge of the countries studied than students who were not in the project. A device used to compare the open-mindedness of project students with that of other students indicated no significant differences.

Monitoring in 1970-1971 through 1971-1972 indicated that project-produced materials were utilized by teachers and that trips were conducted as scheduled.

In 1972-1973, teachers expressed satisfaction with the success of the pilot six-week special-education component involving nine classes of retarded children.

In 1973-1974, test results indicated that junior high school students made statistically significant gains in knowledge of information contained in the specially prepared unit booklets.

In 1974-1975, test results for elementary and junior high students showed an increased mastery in geography, which had been emphasized in newly prepared EWA materials. A locally developed cultural attitudes test produced inconclusive evidence of attitude change; this was attributed in part to problems of measuring such change over a short time period. All materials and special events were provided as scheduled.

In 1975-1976, EWA provided participating students with facts about important global problems and introduced the concept of interdependence. Gains in knowledge for elementary and junior high students could not be determined, because selection of participants, conducted in compliance with the August 1975 court order, resulted in a discrepancy between the reading level of the students and that of the project materials.

In 1976-1977 EWA provided participating teachers with lists of supplemental activities designed to promote the development of basic academic skills. A new essay testing procedure was piloted in selected junior and senior high classes. Test results indicated that a significantly greater number of senior high students included more facts about their essay topic on a posttest; a significant increase was not evidenced in the posttest results of the junior high school pilot group.

EVALUATION OF THE CURRENT YEAR

The current-year evaluation focused on the performance of junior and senior high school students on Fall and Spring administrations of tests developed in cooperation with the project staff. Project activities and functions were monitored and observations were recorded in the EWA Service Log.

IMPLEMENTATION

The project operated in general harmony with specifications stated in this year's proposal. Education in World Affairs (EWA) provided effectively coordinated programs for 35 upper elementary, 24 junior high, and 15 senior high classes in 59 public and 10 non-public schools.

Due to problems beyond the control of EWA, the elementary and junior high school liaison teachers who were selected in the fall were not officially appointed until April. As a result, the project administrator, the senior high liaison teacher, and project staff had to assume those duties (in addition to their own) for most of the year. Working together, they organized special programs and trips, prepared and disseminated books, charts, posters, filmstrips, booklets, and background notes for each unit of study. Student materials specially prepared by EWA included information on the topics studied and a variety of basic skill activity pages to stimulate student learning. Teachers who volunteered to act as

project sponsors in their schools received these materials and services. The newly appointed liaison teachers have since assumed their program responsibilities. In spite of this personnel handicap, all participating classes received materials and speakers, and attended the special programs.

At the beginning of the project year, separate introductory planning workshops for elementary, junior and senior high level teachers were held at the project headquarters and at local museums and institutions that host participating students throughout the school year. Teachers were introduced to the topics, materials, and trips selected for this year. They were encouraged to share experiences and offer comments, criticisims, and suggestions to the project staff. A combined-level culminating workshop was held at the end of the school year. Teachers heard guest speakers from the New York Times, received suggestions for handling materials, and were briefed on the new guidelines and programmatic changes for the coming project year.

The purpose of the project during the current school year was to introduce participating students to the concept of world interdependence and to extend their knowledge of important global problems. All classes were given the opportunity to visit the United Nations. Selected high school students also went to Washington, D.C. and participated in all-day forums, seminars, and model Senate and United Nations programs. Guest speakers of various nationalities and professional backgrounds visited the project's classrooms and made presentations at special events. Elementary students studied three units: One World/Interdependence, Clothing, and Shelter. The junior-high groups studied two units: One World/Interdependence and Energy. Senior high groups studied three topics currently in the news: Namibia, the Changing Middle East, and Southern Africa. Trips were taken to various cultural facilities where specially prepared programs and lectures were presented to the EWA students. Elementary classes developed original presentations which they gave at end-of-year culminating progrms held in each district; junior high classes participated in a World Fair; and Senior high students participated in forums and seminars on additional topics including Terrorism and the Earth's Resources. They also conducted and participated in a model United Nations and a model Senate Foreign Relations Committee Hearing.

ATTAINMENT OF OBJECTIVES

Objective 1: During the 1977-1978 school year, students in Grades 6-9 participating in the EWA program will improve their knowledge of global issues as evidenced by a significantly ($p<.10$) greater number of students demonstrating mastery between the Fall and Spring administrations of the Global Issues Vocabulary Test.

The attainment of this objective could not be determined because appointments of the elementary and junior high liaison teachers were delayed until April, 1978. Without their input, the development of the Global Issues Vocabulary Test was seriously delayed. Consequently, it was decided that the students in Grades 6-9 would not be tested this year.

Objective 2: During the 1977-1978 school year, students in Grades 10-12 participating in the EWA program will improve their knowledge of concepts related to international affairs and the working of international politics as evidenced by a significant ($p<.10$) increase in posttest scores on the International Political Information Test administered in the Fall and Spring.

This objective was attained. The International Political Information Test was developed cooperatively by the evaluation team and the project staff. The 25 test items included vocabulary basic to geography, human rights, economics, politics, and the human condition. The vocabulary list was drawn from special briefing papers, activities, and subscriptions provided by the project. The test was administered in the Fall and Spring to five randomly selected groups of participating high school students (N=66). An analysis of the results revealed an average gain of one point in the mean score from pretest to posttest. Although this gain was statistically significant, the evaluation team has suggested exploring more meaningful indications of project success, such as the establishment of mastery levels for each subtest of the International Political Information Test.

SUMMARY AND CONCLUSIONS

The Education in World Affairs project during the 1977-1978 school year provided participating students with background information about important global problems and the concept of interdependence. Instruction was organized into units and followed a multifaceted approach which included written and visual materials, trips, special programs, and guest speakers. Elementary and junior high classes participated in end-of-year culminating programs. Evaluators' observations of EWA programs verified attendance and participation by students at every level. Senior high students participating in seminars and forum discussions, the model United Nations, and model Senate Hearings appeared to be very well prepared for these events.

An analysis of test results for senior high students revealed a statistically significantly increase in the mean scores from pretest to posttest on the International Political Information Test. It should be noted that these results reflected a gain of only one item. The evaluation team recommended that future testing efforts include the establishment of mastery levels to provide a more meaningful indication of project impact. The EWA staff has agreed to reexamine their senior high materials and their teacher-support system in response to this recommendation. Planning has already begun for substantive changes in the senior high component. Students In Grades 6-9 were not tested this year because the elementary and junior high liaison teachers were not appointed by the School District until April.

Finally, planning-workshop sessions held at the beginning and end of the project year for participating teachers provided an opportunity for dissemination of information and informal sharing of ideas among teachers and project personnel. The evaluation team concluded that the project coordinated many of the finest available materials and services to provide relevant, well-planned educational experiences appropriate to each grade level served.

ENGLISH TO SPEAKERS OF OTHER LANGUAGES

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The English to Speakers of Other Languages (ESOL) project helps pupils in Grades K-12 whose first language is not English to master English language skills. Using a staff of bilingual teachers, it emphasizes development of English speaking and listening skills.

RATIONALE

The acquisition of English as a second language has been described by Robert Lado as "acquiring the ability to use its structures within a general vocabulary under essentially the conditions of normal communication among native speakers at conversational speed."

Most of the pupils in the ESOL project lack basic skills in spoken and written English. Language instruction needs to be provided in a systematic manner because chance contacts with spoken English are usually insufficient for these children to gain needed skills. The project provides a springboard into reading and writing skills by emphasizing essential structures, idioms, and vocabulary of oral English. Bilingual teachers facilitate communication.

EXPECTED OUTCOMES

Pupils served by this project are expected to show marked improvement in speech production and comprehension, and to demonstrate better communicative skills in English when compared with non-ESOL pupils with similar backgrounds. It is expected that pupils will learn the patterns of everyday speech and will develop appropriate skills in reading. These pupils are expected to be able to use and understand English in normal conversational settings when their participation in the project is completed.

PREVIOUS FINDINGS

Because special instruction is provided to all eligible pupils identified as needing service, control-group evaluation designs have not been used. In recent years, rigorous statistical control of extraneous variables has increased the probability that improvements in skills were directly related to project impact.

Evaluations since 1966-1967 have revealed improvement in pupils' English-language competencies during the school year. Parents, principals, and both

project and homeroom teachers reported that ESOL was successfully meeting its objectives. Surveys and observations by evaluators were corroborated by results of tests. The Linguistic Capacity Index, the Boehm Test of Basic Concepts, and the Stanford Diagnostic Reading Test (Level 1) indicated that longer contact with the project was associated with learning more English.

In addition to contact with the project, the following factors were found to be related to the acquisition of English-language skills: (a) pupil's length of time in an English-speaking environment, (b) pupil's adjustment to school, (c) school attended, (d) grade, (e) class size, (f) hours of instruction, and (g) instructional setting. For pupils in all-day, self-contained classrooms, more than 90% of the year's increase in test scores was found to occur in the first half of the year. This was in striking contrast to pupils attending project classes part-time, for whom the increase tended to be distributed evenly throughout the year.

In 1973-1974, grade, years on mainland, length of instruction, text used, and class size were found to be significantly related to test scores. When age, grade, or length of time on the mainland was controlled, pupils in the project for more than a year scored better than those with less than a year's contact with the project.

For the past three years evaluations have utilized simultaneous control of additional variables: grade of entry into ESOL, time on the mainland before ESOL, mother tongue, and sex. Marked improvement in aural comprehension was found to result from time in the project.

EVALUATION OF THE CURRENT YEAR

In the current year, the ESOL evaluation emphasized measurement of the acquisition of English comprehension and speaking skills. Evaluation staff also worked with members of the Division of Data Processing, the Division of Administrative and Survey Research, and the Division of Foreign Languages in order to improve the management of ESOL screening data.

IMPLEMENTATION

The project's intended mode of operation was implemented. Through the use of a computerized file of pupils screened during the past three years and through administration of the Philadelphia ESOL Screening Test, placement decisions were made for approximately 10,000 pupils at Title-I-eligible schools. In the schools where service was provided by the Title I English to Speakers of Other Languages program, 4,868 pupils were located through the file and 3,194 were located through school records and then were screened.

Program supervisory personnel tested 72 pupils at Title-I-eligible schools where no service was planned for the current year. When a pupil entitled to assistance was found, the supervisory personnel were to contact the principal in order that the pupil be informed of the right to transfer to a nearby school offering an appropriate program.

During the spring, the Division of Administrative and Survey Research produced a list for each school showing pupils who had been reported to be in ESOL. Teachers used these lists to recommend ESOL placement levels for the coming fall. When a pupil in the class was not found on the list, teachers made recommendations on a separate form. In this way, recommendations were gathered for all pupils in the program including those who had transfered from one school to another.

Evaluators made 36 monitoring visits to program schools through April 1978. During the year-end testing period, they visited all but two schools. These visits suggested that screening, instruction, and testing were carried out in accordance with the proposal. At many sites bilingual instruction supplemented instruction in English.

Evaluators found that teachers followed the project design by avoiding switching from one language to another inappropriately. Evaluators had the impression that reading skills in English received more emphasis this year than in the past. One ESOL class was observed meeting in a classroom where ESOL and other instruction were taking place simultaneously, possibly causing interference between the two.

On evaluation control documents, teachers of four schools reported that pupils had been promoted out of the ESOL program at mid-year or early spring. Since this is contrary to program policy as evaluators understand it, supervisory personnel should consider this issue in their communication with teachers next year.

At one high school, enrollment in ESOL and in Spanish first-language instruction was low. The project director reorganized the program in order to bring the number of teachers in line with needs at the site. As the reorganization was occurring during the planning of the final evaluation, this site was omitted during assessment of the objectives.

In conclusion, the ESOL project was conducted in a manner consistent with the proposal. Extraordinary efforts were extended by program staff to identify all pupils whose first language was not English and who had not mastered English language skills.

ATTAINMENT OF OBJECTIVES

Objective 1: The longer a pupil studies ESOL, the higher he/she will score on the Test of Aural Comprehension of English (TAC) when the pupil's background is taken into account. A regression equation computed on tests administered in March 1978, will show a statistically significant relationship ($p<.10$) between the length of time a pupil studied ESOL and TAC scores when sex, age, grade, place of birth, mother tongue, and length of residence on the mainland are controlled.

This objective was attained.

About 1,300 pupils were tested with the TAC in May and early June. Background information for 1,055 pupils was complete enough for inclusion in the general linear regression model analysis. The results suggest that aural comprehension was increased by the program to a statistically significant degree when sex, grade, place of birth, mother tongue, length of residence on the mainland, and other variables were controlled statistically.

In evaluating the program's impact on aural comprehension, evaluators explored several analyses which differed in the number and types of variables to be held constant. In all the models tested, the impact of ESOL was consistently positive -- varying between 0.5 and 1.5 items for each year of ESOL -- regardless of the other variables in the analysis.

Pupil's age was deleted from the analysis presented and several additional variables were included because the evaluators felt that the analysis was probably more realistic than others. For the sake of clarity the selected model ignored interaction terms.

The impact of each of the independent variables on score is shown in Table 1. The test form taken by the pupil was held constant and no statistically significant relation to score was found. The sex of the pupil was also held constant statistically. Girls tended to score slightly higher than boys, and the difference was statistically significant. This finding must be treated with caution because it has not been found in the past.

Birthplace was represented by two variables, neither of which was significant. Puerto Rico was compared to all other birthplaces for the variable labeled "Puerto Rico," and the variable "other countries" compared all pupils born in foreign countries to pupils born either on the mainland or in Puerto Rico.

By comparing Spanish speakers to speakers of other languages, mother tongue was controlled. Pupils who spoke Spanish scored nearly three points below speakers of other languages, a difference which was statistically significant.

As expected, the number of years in an English-speaking area made a statistically significant contribution to a pupil's score. The regression equation suggests that score increased slightly less than one item for each year of residence, when the other variables were controlled.

The grade of the pupil seemed to have a complex relationship to score. This variable appears twice in the model, as grade and grade squared (grade x grade). Both are significantly related to score. Figure 1 shows the effect of grade when all other variables are controlled. Scores rise sharply in the elementary grades, peak in the middle grades, and fall off in the upper grades. The evaluators suspect that the curvilinearity of grade with score may be due to interactions between birthplace, grade, and other variables.

When all the preceding control steps are included in the analysis, the key question can be answered: to what extent does ESOL affect performance? As shown in Table 1, each month a pupil studies ESOL, his score increases .11 items -- or 1.11 items in a 10-month school year. This increase is highly significant.

The results shown in Table 1 indicate that months in ESOL had a positive, direct effect on test score, regardless of the linear effects of the other variables and the quadratic effect of grade.

Objective 2: A random sample of pupils (100 who will have been screened with the current test and who are in the program) will be tested in November, February and April. A part correlation will be used to show that score increases with increased amounts of experience in the program when the English-speaking competence of the pupil at the time of the initial screening is controlled.

The objective was attained although the design was altered. The length of time a pupil has been enrolled in ESOL, and the number of contact hours of ESOL per week were both found to be significantly related to speaking ability in the expected direction. In order to measure the impact of these aspects of ESOL particiption on speaking ability, the pupil's initial screening score and other variables were controlled statistically. Separate analyses of the two speaking sections of the Philadelphia ESOL Screen Test were consistent in showing that, after holding other variables constant, increased participation in an ESOL program was significantly associated with better oral production.

Based on fall screening tests and computer lists returned from schools by February, a random sample of all pupils reported to be in ESOL at target schools was drawn. The sample was stratified in order to increase the number of pupils in the sample who were tested in the 1976-1977 school year. A total of 279 pupils from 32 schools were selected. Each school was assigned two testing periods, separated by two months, for readministration of the screening test. The speaking

sections of the screening test were readministered to half the pupils drawn at each school in each of the two testing periods. For some schools, the initial readministration was in March; for others it was in April. Thus, readministration of the screening test extended from March through June.

Of the 279 pupils drawn, only 164 (58%) could be used for the evaluation. Table 2 shows the reasons for the large attrition from the sample.

Because screening tests exhibit statistical properties different from most achievement tests, the analysis of this objective attempted to overcome difficulties inherent in screening test scores.

The pupil's screening test score upon entering the program was held constant statistically. Since this variable is not normally distributed and was suspected of being complexly related to retest score, evaluators controlled for curvilinear effects. (Note: Although a higher-order fit could have been used, a comparison of the shrunken multiple R^2 of the model presented in Table 3 shows that it is a good approximation to a higher-order equation.) The first three variables in Table 3 refer to the linear, quadratic, and cubic components of pretest score. The nonsignificance of the regression weights for these three variables is probably due to their high multi-collinearity. Since the inclusion of these variables was to control for test scores, neither the regression weights nor their associated significance levels are of direct interest.

Pupils who receive supplemental services in addition to ESOL may differ systematically from ESOL-only pupils. A pupil who participates in these programs may have his contact with ESOL reduced and may differ from ESOL-only pupils in other ways not reflected directly in the regression equation (e.g., social class). To control for this possibility a fourth variable, participation in other programs, was included in the analysis. Participation in other programs was significant. Its regression weight indicated that pupils enrolled only in ESOL tended to score nearly one and one-half points higher than pupils who were also in bilingual, Follow-Through, or other programs.

Many pupils in the sample attended ESOL last year. The overrepresentation of these pupils in the sample, the possibility that the holdovers from last year may differ systematically from their ESOL cohorts (many of whom were promoted out of ESOL last June), and the possibility that scoring criteria may have shifted between the fall of 1976 and the fall of 1977, suggested that this variable, holdover, be included. Table 3 does not support the hypothesis that these pupils were significantly different from pupils newly admitted this year when the other variables are held constant.

The possibliity of ceiling effects in the screening test led evaluators to transform the number of months in ESOL into log units. Table 3 shows that these log units were significantly related to test scores. Figure 2 shows the relation of months in ESOL to score.

Substantial variation in the average number of contact hours of ESOL per week was found among project sites during monitoring. Table 3 shows that for each additional hour of ESOL per week, a pupil's score rises by .174 of an item -- an increase which was highly significnat.

Table 4 presents the analysis for Part III of the screening test. Once again, exposure to an ESOL program, as measured by both the number of months of enrollment and by the number of hours of ESOL instruction per week, was significantly related to score in the expected direction. The first three variables refer to curvilinear trends in pretest score for Part III.

For Part III of the screening test, pupils in ESOL improved 3.034 points for each log unit of months in ESOL (Figure 2) and .29 points for each hour of ESOL per week. These values are larger than the ones found for Part II. This is probably because the range of scores for Part III is larger than for Part II. In general the results in Table 4 are remarkably similar -- in magnitude, sign, and significance -- to those in Table 3, lending confidence to the finding that the more contact pupils have with ESOL, the greater their ability to speak English.

Both parts of the screening test yielded two kinds of evidence that ESOL was effective. Change in score due to months in the program may be partially due to other factors, e.g., maturation and living on the mainland. The same, however, cannot be said about the effect of the number of ESOL contact hours per week. These two indicators independently support the conclusion that ESOL teaches pupils how to speak.

SUMMARY AND CONCLUSIONS

Extraordinary efforts have been made by project management and supervisors in the identification of pupils with limited English-speaking abilities. A survey was made of Title I schools which were not already served by bilingual or ESOL programs. Pupils were screened by program staff to determine whether population shifts necessitated additional program sites and to advise pupils of their right to transfer to a school offering ESOL. At year's end, teachers made placement recommendations to be used in assigning their pupils to classes in the fall.

Conversation with program personnel and 36 visits to site locations indicated that the ESOL program was conducted in a manner consistent with the project's intended mode of operation.

Analysis of 1,300 tests suggested that there was an increase in aural comprehension attributable to participation in the program. This increase was statistically significant even after controlling for the effects of grade, sex, residence in an English-speaking environment, and ethnic background. Analysis of tests of a sample of pupils suggested that the program produced gains in speaking scores. When initial ability was controlled, statistically significant relationships were found for both the number of months the pupil was enrolled in the program and the number of instruction hours per week.

TABLE 1

REGRESSION OF TAC SCORES ON VARIOUS ESOL PUPIL CHARACTERISTICS

Independent	Regression Weight	Significance*
Test Form (A=1, B=2)	0.79	.1536
Sex (boy=1, girl=2)	1.18	.0331
Birthplace Outside U.S. Mainland:		
Puerto Rico	-0.45	.6081
Other Countries	1.02	.4593
Mother Tongue (Spanish=0, all others=1)	2.84	.0627
Years in an Eglish-speaking Area	0.97	.0001
Grade (linear term)	5.63	.0001
Grade Squared (quadratic term)	-0.34	.0001
Months in ESOL	0.11	.0001

R^2=0.4722 Mean Score=20.79 Standard Devaiation of Scores about the Regression hyperplane =8.90.

*Values given have not been corrected for heteroscedasticity

TABLE 2

REASONS FOR SAMPLE MORTALITY FOR THE SCREENING TEST OBJECTIVE

Description	Number	Percent
Total Sample Drawn	279	100
Included in the analyses	164	58
Not included in the analyses	115	42
Not on roll	56	20
Received no ESOL*	30	11
Prolonged absence	13	5
Missing Information	16	6

*Includes pupils in bilingual programs getting ESOL-type services, pupils promoted out of ESOL during the year and pupils incorrectly included in the sample.

TABLE 3

REGRESSION OF SCREENING TEST SCORES (PART II)
ON ESOL PUPIL PARTICIPATION

Independent Variable	Regression Weight	Significance
Screening Test Score Upon Entering ESOL		
linear term	0.521	.1473
quadratic term	-0.029	.6445
cubic term	0.001	.6072
Participation in Other Programs	-1.477	.0051
Holdover	0.613	.5496
Months in ESOL (log units)	1.698	.0821
Hours of ESOL Per Week	0.174	.0009
R^2=0.4593 mean score=10.19 Standard Deviation of Scores about the Regression Hyperplane= 2.82		

TABLE 4

REGRESSION OF SCREENING TEST SCORES (PART III)
ON ESOL PUPIL PARTICIPATION

Independent Variable	Regression Weight	Significance
Screening Test Score Upon Entering ESOL		
linear term	0.795	.0460
quadratic term	-0.034	.4551
cubic term	0.001	.5922
Participation in Other Programs	-2.101	.0219
Holdover	1.08	.5463
Months in ESOL (log units)	3.034	.0761
Hours of ESOL Per Week	0.296	.0011
R^2=0.4359 mean score=16.11 Standard Deviation of Scores about the Regression Hyperplane=4.93		

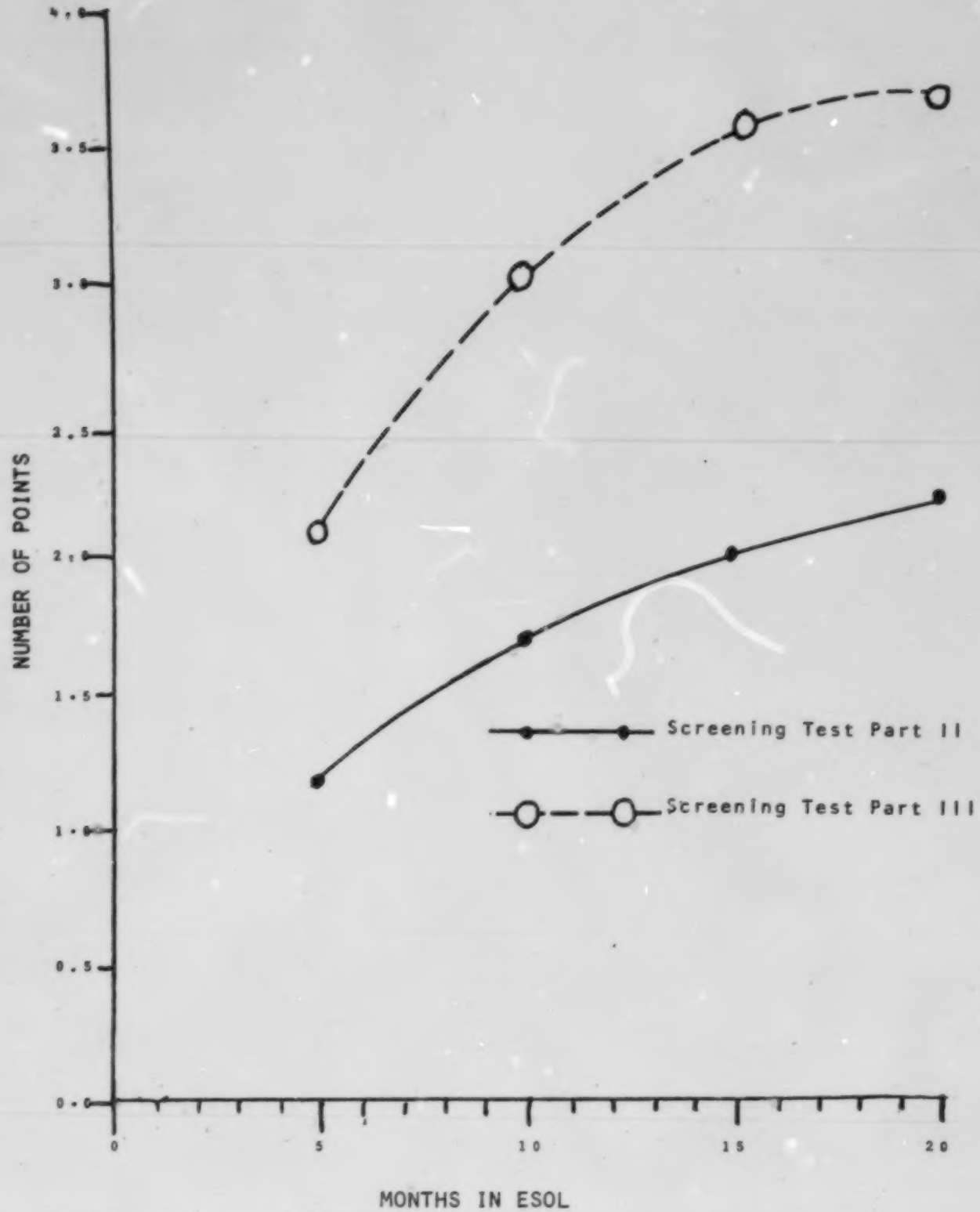

Figure 2. Relationship between months in ESOL and speaking scores when other variables are controlled.

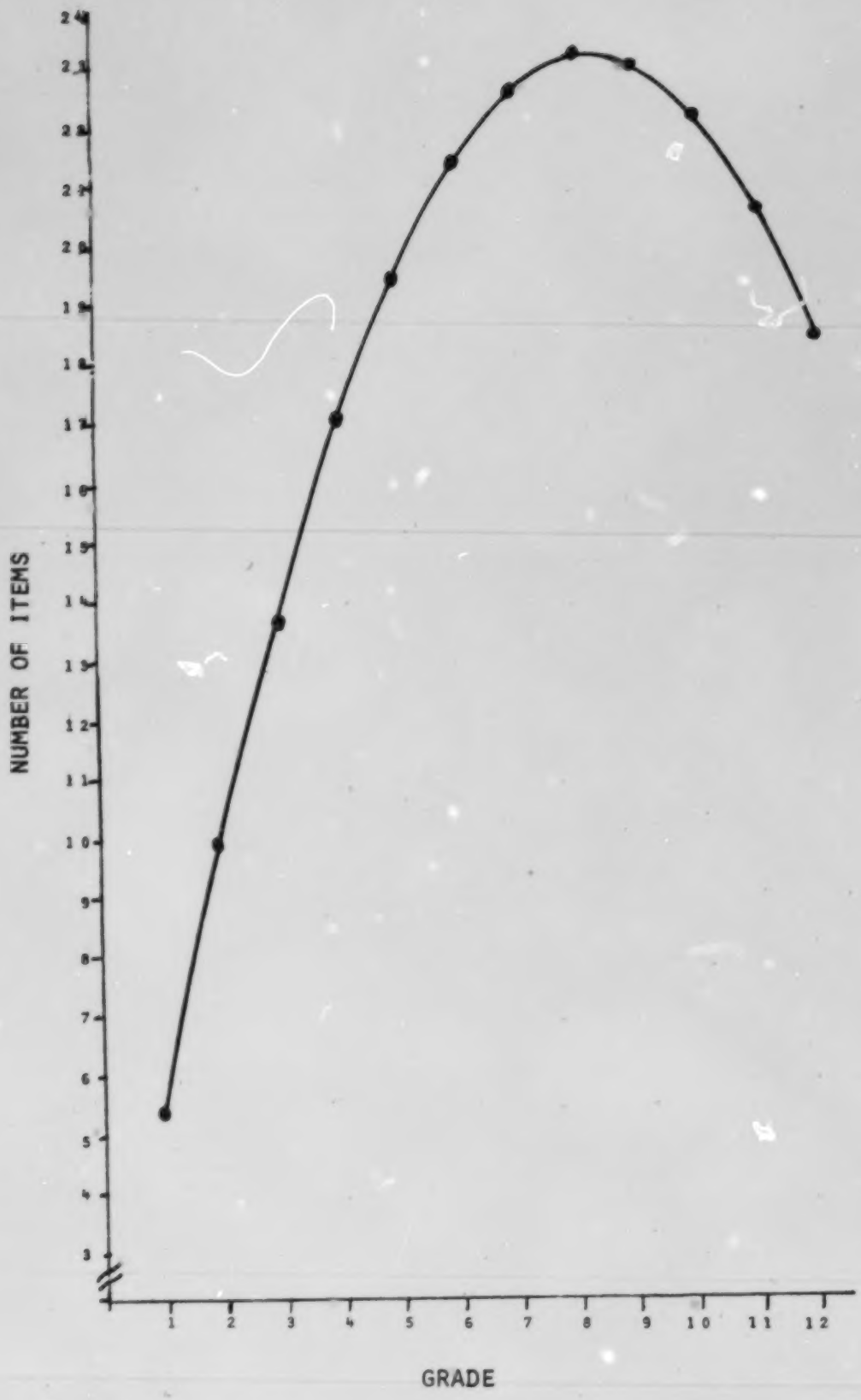

Figure 1. Relationship between grade and TAC score when other variables are controlled.

FOLLOW THROUGH (ESEA TITLE I COMPONENT)

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

Follow Through is a nationwide, comprehensive program for children in Grades K-3. It emphasizes planned variation in instructional approach, intensive parent and community involvement in school functioning, and special supportive services.

Additional Title I funding in Spring 1975 made possible a locally developed expansion of Follow Through to new schools and an extension of the regular program to fourth grade in schools already in the project. The extension to fourth grade had to be discontinued after 1975-1976, due to fiscal conditions. The expansion program maintains all the essential characterisitcs of the nationwide parent program.

RATIONALE

The local project administration formulated a needs statement as the basis for introducing Follow Through in Philadelphia:

> Children having lived in or existed under certain conditions of the city have the need for a comprehensive program in the early years. An attempt must be made to provide them with the special support services deemed important to the learning process, i.e., medical and dental care, nutrition, social and psychological services, teacher training and active parent involvement. Children need to experience a good feeling about school and its environment derived from achieving success academically and socially. There is also a need to offer alternative instructional models to improve opportunities for these children. New approaches to early childhood education must be examined in the pragmatic settings of the local schools.

EXPECTED OUTCOMES

The broad goal of Follow Through is to improve the scholastic achievement of the participating children by meeting their academic, health, and psychosocial needs through provision of a comprehensive service program for both the children and their parents. The project aims to attain this goal by providing the following services: (a) an individualized instructional program adjusted to the ability level of the child, in order to increase his productivity, self-expression, and self-confidence; (b) a continuous in-service program for all staff, administrators, and parents; and (c) health services, diagnosis, and treatment as necessary to promote the child's educational, emotional, and physical development.

PREVIOUS FINDINGS

In the original program, implementation of the instructional component can be summarized as follows:

The Bank Street and Behavior Analysis Models have proven the most consistently well implemented of the seven different instructional approaches. The Bilingual Model has shown improvement in the last few years. EDC has attained good implementation recently. The Florida Parent Education Model has been improving recently but has not reached the level of implementation of the other models. The two models which use the locally developed process approach (Philadelphia Process and Parent Implemented) have shown very strong implementation efforts in the last few years.

Implementation in the expansion program appears to be improving in general. As the program reached Grade 2 in 1976-1977, there were no funding "freeze" problems, as had occurred during the first two years. Option I, which is derived from the Behavior Analysis approach, has achieved good implementation overall. Option II, combining Bank Street Materials with Behavior Analysis techniques, continues to have some implementation problems. Option IV, adapted from the Bank Street approach, has achieved the best implementation overall. Option V, with Bank Street and Bilingual emphases, is gradually improving in implementation.

Achievement in the original program continues to be at a very high level through Grade 2 and to gradually improve in Grade 3. In 1976-1977 percentages above the 50th percentile in the total program in Total Reading, K-3, were 79, 54, 55 and 35% respectively; and in Total Mathematics, 65, 57, 53, and 45% respectively. Within the total program the highest achieving models continue to be Behavior Analysis, Bank Street, Philadelphia Process and Parent Implemented. In the expansion program, there continued to be improvement over previous performance in Grades K and 1 and fairly high performance in Grade 2. In the latter grade in 1976-1977, in Total Reading 18 of the 28 schools, and in Total Mathematics 23 of the 28, had at least 40% above the 50th percentile. In spite of generally high levels of performance in both the original and expansion programs, however, neither program, with the exception of the former in mathematics, consistently out-performs the total districts in which the program schools are located; total district performance has apparently become high also due to the impact of other Title I Programs.

Among original program "graduates" especially those from the higher achieving models, there continues to be higher performance than the total city in upper elementary grades when there was previous prekindergarten experience and longer exposure to Follow Through; this performance is still further heightened when combined with low yearly absence rates.

The parent involvement component continues to be well implemented throughout the original program in many respects. Recently, however, it has not been the extremely well implemented component that it was for many years. Program sites are apparently not making the same effort as previously.

In the supportive services area, in spite of continued reduction of available funds over the last three years, there are increasingly better efforts to make the most of the situation and make better use of community agencies when money for specially contracted services is lacking.

EVALUATION OF THE CURRENT YEAR

The evaluation design remains best characterized as a comprehensive documentation approach that centers on (1) achievement, both cross-sectional and longitudinal, using a computerized individual pupil file for the latter, (2) classroom process and implementation levels, using the Classroom Observation Routine (COR), as has been done for the last three years, (3) pupil daily attendance, (4) parent involvement, (5) staff development, and (6) provision of special supportive services.

IMPLEMENTATION

During 1977-1978, the project's intended mode of operation overall was partially implemented.

The year was notable for factors with far-reaching negative effects on implementation in both the original and the expansion programs: The U.S.O.E. had served notice the previous Spring that, beginning in September 1977, the Title I educational deprivation criterion would be rigidly enforced in both programs. The first three months of the school year were punctuated by a custodial workers' strike and a very serious School District funding crisis. The programs had barely begun to adjust to the extensive revamping necessitated by the Title I ruling -- including manifold efforts to help the large number of parents involved accept the exclusion of their children because they were doing too well academically -- when the National Follow Through Office invoked original Follow Through Program (Community Services Act, CSA) guidelines, indicating strict adherence to Title I mandates involved violation of the original program's directives.

This non-compliance situation as regards CSA was ordered to be rectified by December at the latest. As a result, the original program had to be subjected to a second round of reorganization before mid-year. To meet the conflicting requirements of both funding sources within the total budget available, four of the original 18 schools had to be transferred to the Expansion Program, and the total number of program classes within the 14 remaining sites had to be drastically reduced while simultaneously limited to Title I eligible students.

The following statements regarding implementation in both programs, then should be interpreted in light of the above considerations. It is, furthermore, important to remember that the Title I ruling runs counter to three basic structural elements in Follow Through: (a) instruction through intact classroom units, (b) unrestricted heterogeneous grouping, and (c) continuity of instruction K-3.

Original Program

As noted above, implementation occurred in an entirely new and very unfavorable setting in 1977-1978. Despite that fact, efforts at good implementation were in evidence in the remaining 14 schools, and, as of 1977-1978, in the six rather than seven models, constituting the original program. The program served approximately 2,600 pupils K-3 during the year.

In describing original program implementation, separate sections below will focus on its three main components: (1) instructional approach (model), (2) parent involvement, and (3) supportive services. Implementation data were obtained from District Liaison Assistants' monthly reports, site-visit reports by model sponsors, and classroom observation data collected using the Follow Through Classroom Observation Routine (COR). The COR is a locally developed instrument in use since 1974-1975 which yields information on specific model characteristics, staffing and pupil grouping patterns, instructional media, and cognitive and non-cognitive strategies employed during instruction. Beginning in December two rounds of observation on the COR were conducted in almost half the program classes by full-time staff and three experienced hired observers.

(1) Instructional Approach

A relatively high level of implementation was able to be maintained in the Bank Street Model during this year of drastic changes. The model operates in only two schools now due to the reorganization; the Elverson School was transferred to the Expansion Program. There were consistent sponsor as well as local coordinating and training staff efforts during the year. A major focus of training was individual staff conferences; the reorganization produced a large segment of teachers new to the model alongside those with experience. The sponsor continued to use the Behavior Ratings and Analysis of Communication in Education (BRACE) instrument and introduced a new measure in First Grade (Spring), the Analysis of Children's Oral Story Telling Task (ACOST). The following findings emerged from the observation (COR) data: while this model was the highest in use of teacher-made materials, and average to above-average in general and specific approval behaviors, teachers employed small group instruction less than, and disapproving behaviors more than any other model, and were not at all distinctive in their use of supportive correction, clarifying moves, or encouragement of student expression of need.

The Behavior Analysis Model was also relatively well implemented. The two reorganizations during the first half of the year made sponsor and local training staff redouble staff development efforts. The Pratt-Arnold School, site of the new Behavior Analysis Resource Center (BARC) -- an outcome of this model's operation in Philadelphia being designated a nationally effective program by the Joint Dissemination Review Panel (JDRP) of OE/NIE in Fall, 1977 -- had two changes in the principalship during the year, but sponsor and local coordinators concentrated much of their effort here. BARC became a full-fledged reality in the Spring. The sponsor continued to employ the Weekly Individual Progress Report (WIPR) as well as a brief classroom observation form and the Annual Consumer Evaluation (ACE) routine. Local COR obserbation data revealed: small group instruction was engaged in better than 70% of the time during the observations, highest of all the models; instances of approval and specific praise were observed here more frequently than anywhere else as were, and especially, use of tokens and other types of rewarding behaviors; on the other hand, use of disapproval was not as infrequent as would be expected.

One of the three Bilingual Schools, Ferguson, was also transferred to the Expansion Program during the reorganization. The model as a whole continued to improve despite the year's confusion; the improvement was evident in both schools, but particularly in the one that had been consistently low in implementation, where receptivity to sponsor direction began to take secure hold. The sponsor continues to stress a special curriculum centering on the development of bilingual oral language and reading skills, social science concepts and skills in the child's dominant language, and pride in one's own and appreciation for other cultures. COR observations yielded the following information: there continued to be a very high incidence of whole class instruction; use of small groups was only seen about one-third of the time; there was some evidence of teacher-made materials, but not along ethnic lines; approval behaviors were low and disapproval high in relation to the other models.

Implementation in the EDC Model was good, considering the year's events. One of the three schools in this model, Kelly, was also phased into the Expansion Program in the course of the reorganization. The model was also without the services of a District Liaison Assistant (DLA) for most of the school year, since a replacement for the retired former DLA could not be assigned until well after mid-year. Other local program staff covered in the interim, however, and sponsor support continued to be consistent. The sponsor introduced its own testing program at Third Grade, consisting of pre-post administration of the Metropolitan Achievement Test (MAT) and the Coopersmith Self-Esteem Inventory -- both instruments formerly used in the national evaluation -- and Spring only administration of the Productive Language Assessment Task (PLAT). According to COR data, instruction was about equally split between whole class and small group instruction; the model was about average in approval, but lowest in disapproving behaviors, and highest in supportive correction, encouraging student expression of need, and clarifying moves.

The Florida Parent Model is no longer associated with Philadelphia. One of the two schools in the model, Kearny, had to be transferred to the Expansion Program in the reorganization. The remaining school, Nebinger, at the request of the District Superintendent, is to become affiliated with a local adaptation of the Behavior Analysis (BA) model as of September, 1978. During most of 1977-1978, while officially remaining an original program school, it was model-unaffiliated. Behavior Analysis Resource Center (BARC) personnel conducted extensive training of Nebinger staff in April and May in preparation for next year's operation. Unfortunately, there is a good deal of uncertainty as to whether the same staff will be assigned to the school next year, and some reluctance on the part of school administrators to adopt the BA Model's philosophy in its entirety.

The Parent Implemented and Philadelphia Process Models, which both use the latter's process approach, have experienced some problems this year, but the overall level of implementation remains good. The principal difficulty was the loss of special instructional support personnel in the course of the various reorganizations; Math and Science areas appear to have suffered most from this situation. On the other hand, the special materials needed to implement this model's basic approach, derived from the AAAS philosophy and supplemented with a special form of Human Development/Interaction Laboratory, were adequate for perhaps the first time, and an experienced staff put the materials to good use. The model has also recently adopted some aspects of the BA approach, notably structured curriculum materials, and some BA philosophy. The COR data supply some confirmation of the varied characteristics of this model: Approval behavior is very high, next highest to BA, while encouraging student expression of need is next highest to EDC and use of teacher-made materials is next highest to Bank Street; on the other hand, small group instruction was in evidence only about half the time and there were fairly frequent instances of whole class instruction and use of disapproval.

(2) Parent Involvement

This component was particularly affected by the Title I ruling and its aftermath. Parent disillusionment was high among that very substantial number whose children suddenly became ineligible -- the program population was just about halved compared with 1976-1977. It required concentrated efforts on the part of all administrative and special support personnel to restore this component to a relatively high level of functioning, but by the end of the year Parent Advisory Committees (PACs), as well as the special Model Management System, were in full operation again in almost all sites. As will be seen in the Attainment of Objectives section below, however, restoration of functioning in this area was not sufficient to enable the expected performance criteria to be met.

(3) Supportive Services

This component has been consistently subjected to reduced availability of funds for several years now and the upheavals of 1977-1978 produced even more reductions. Though some few schools were able to contract with agencies for special medical, dental and psychological services, this kind of comprehensive arrangement was seen as being less and less feasible and the decision was made to rely on School District medical services as much as possible and to channel the available monies into dental and mental health services. Social services were provided by parent involvement coordinators who were located at the school sites.

Expansion Program

In 1977-1978 the Expansion Program achieved satisfactory implementation overall as it reached its full span of grades, K-3, for the first time. Unfortunately, this was coupled with the need for completely restructuring the program to comply with the new Title I directive. As noted above, four former original program schools -- though three of these had been partially expansion -- now function as part of the expansion program and have adopted one of the latter's instructional "options" in place of the original model approach. The program served approximtely 10,200 students in 29 sites during the year. Implementation data were obtained from District Liaison Assistants' (DLA's) reports, who, in turn, relied on the program's training coordinators' and Resource Teachers' reports, and from COR observation data collected by the evaluation staff. Two rounds of observation were collected in all Third Grade classes, where the program was newly introduced in 1977-1978, and in a one-third sample, stratified by grade and option, of the K-2 classes.

The funding/reorganization situation precluded summer training for the Third Grade teachers, so special efforts had to be made to provide on-going training and introduce the program at this level simultaneously.

Both Option I and Option IV, which are local adaptations of the Behavior Analysis and Bank Street Models respectively, appear to be fairly well implemented overall, with the latter continuing to have somewhat of an edge over all the others in implementation, possibly because its philosophy is most familiar to the teachers. Option V, the locally developed Bank Street/Bilingual combination continued to improve in implementation. Option II, which represents a locally developed combination of Behavior Analysis techniques with a Bank Street curriculum, continued to experience problems apparently still essentially attributable to the parent models' philosophical differences. COR data indicate that all options engage in whole class instruction more than any other form (range = 39 to 58% of the time during observations), and all employ small group instruction only 20% of the time. Aides were observed assisting at least 50% of the time in Options II and V, but 41% and 37% of the time in Options I and IV. Parent Scholars

were observed slightly more than 1/4 of the time in Options I, II and IV, but only 17% of the time in Option V. Option I has more approval and reward behavior than any of the other Options, but Option II has the most specific praise behavior; it is also to be noted that Options I and II have the highest instances of cognitive disapproval. Options IV and V have the highest instances of use of teacher-made materials as well as the lowest rate of occurrence of cognitive disapproval, but are not different from Options I and II in clarifying student responses, encouraging expression of need and supportive correction.

Parent involvement continued to improve despite the Title I ruling, and also, as noted for the original program, because further efforts had to be expended in helping parents to deal with the effects of the ruling. The parent involvement coordinator introduced special parent cluster meetings to bolster this component. In the supportive services area, reliance on School District medical services is coming to be more and more the direction taken, and special contracts are used for dental and mental health services, particularly the latter.

ATTAINMENT OF OBJECTIVES

The first two objectives below required analysis of Second and Third Grade February, 1978 city-wide test results in comparison with same grade results for February, 1977. The city-wide testing program uses the California Achievement Test (CAT) for all students in the city in Grades 1-12.

Data for the third objective was obtained from each original program school using an annual recording form developed by the evaluation unit. The data for the three supplementary objectives was obtained from School District Health Services personnel.

Objective 1: In at least 2/3 of the expansion program schools, second grade pupils in Total Reading on the California Achievement Test (CAT) in February, 1978 will have a smaller percentage scoring below the 50th percentile than the total second grade group in these same schools in February 1977.

This objective was considered partially attained. Full attainment of the stipulated two-thirds would require that at least 19 of the 29 schools meet the criterion. Since only eleven schools showed a smaller percentage below the 50th percentile this year, there was definitely not complete attainment; since the eleven schools that did meet the criterion constitute more than 1/3, however, a judgment of partial attainment appeared to be in order.

In February, 1977 percentages of Second Grade pupils scoring below the 50th percentile in Total Reading across all 29 Expansion Program schools ranged from 17% to 79%. In February, 1978 percentages for the same grade across all schools showed a range of 23% to 100% below the 50th percentile. Three schools

had 23-37%; seven, 44-47%; six, 50-58%; four, 62-67%; two, 75 and 78% respectively; four, 80-85%; and three, 90-100%. The eleven schools meeting the criterion, i.e., having a lower percentage below the 50th percentile in 1978, showed a range of 23-65%. Of the 15 schools in 1977 having more than 50% below the 50th percentile, eight improved, i.e., had lower percentages in 1978.

Objective 2: In at least three of the seven models in the original program, third grade pupils in Total Reading on the CAT in February, 1978 will have a smaller percentage scoring below the 50th percentile than the total third grade group in these same models in February, 1977.

This objective was not attained. Only one of the six models, the single-school Parent Implemented Model met this objective. (As of FAll, 1977-1978 there were only six models in Philadelphia; the seventh, the Parent Education Model, ceased to be affiliated with the city at that time.)

The negative impact of the year's upheavals appears most evident in an objective like this. As noted, the Parent Implemented Model alone met the criterion, reducing its percentage below the 50th percentile from 61% to 56% between the two testings. In the remaining five models, the increase in percentages scoring below the 50th percentile across the two years is tremendous: Bank Street went from 62% in 1977 to 94% in 1978; Behavior Analysis, from 63% to 99%; Bilingual, from 75% to 80%; EDC, from 65% to 98%; and Philadelphia Process, from 60 to 77%.

Objective 3: In at least 2/3 of the original program schools there will be at least one hour of parent volunteer time monthly to match the number of children in the program and at least 70% of the program parents will attend one school meeting or affair during the school year.

This objective was not attained. Only 2 of the 14 schools met the criterion regarding volunteer hours (at least 9 would be required for the two-thirds stated in the objective). Only 4 schools met the criterion regarding attendance at a school meeting.

The range of volunteer hours was 192-13,428; six schools had at least 1,000 hours. The two attaining the criterion had 2,391 and 13,428 respectively. The percentage of parents attending at least one meeting a year ranged from 18% to 210%. The four schools meeting the criterion showed a range of 110-210%. Three other schools had 42-68%, the remaining had less than 30%.

Special Supplementary Objectives Requested September, 1977

Objective 1A: In 3/4 of the program schools, at least 90% of the pupils will receive medical screenings either from School District Health Services Staff or from physicians participating in the Collaborative Health Assessment Program (CHAP), and at least 75% of those referred for care will receive treatment in those schools which have specially contracted medical services.

This objective was partially attained. On the first criterion more than the required percentage was met; 100% of the K-3 children in all of the program schools received medical screenings from School District Health Services staff. As regards the second criterion, concerning treatment, it is impossible to determine whether it was met or not at this point. Twenty of the 43 (combined original and expansion program) schools had special contracts for medical services by the second half of the school year, but to date exact treatment information has not been able to be obtained form the contracting agencies. Apart from the question of specially contracted services, however, treatment was consistently provided to children in need in better than 3/4 (33) of the 43 program schools through general School District arrangements with physician participants in the Collaborative Health Assessment Program (CHAP).

Objective 2A: In 3/4 of the program schools where the above screening and treatment percentages have been met in second and third grade prior to mid-year testing in February, 1978, a smaller percentage of pupils in each of these grades in Total Reading on the California Achievement Test (CAT) will score below the 50th percentile than the total respective second or third grade group in these same schools in February, 1977.

This objective was not evaluated due to the unavailability of treatment figures. When data become available, attainment status will be reported.

Objective 3A: In 3/4 of the program schools where specially contracted dental services can be arranged, at least 90% of the pupils will receive treatment.

This objective as stated must also be regarded as non-applicable at this point because of the unavailability of specific information from the contracting agencies. Seventeen of the 43 schools had special contractual arrangements for this service but exact data are lacking at this time. Again, however, apart from the question of specially contracted services, there was ample provision for at least the screening aspect of this objective; 100% of the pupils in First and Third Grade received dental screenings from School District Health Services staff in all 43 of the program schools.

SUMMARY AND CONCLUSIONS

The nationally affiliated, original, Follow Through program was introduced in Philadelphia ten years ago with the entering kindergarten group of 1968-1969. The project has been K-3 since 1971-1972. The local expansion program, begun in kindergarten in Fall, 1974, attained its full K-3 range for the first time in 1977-1978.

This year was the first in which U.S.O.E. directed that the Title I educational deprivation criterion be rigidly enforced in both programs. The impact of this

ruling was a seriously adverse one, doubly so in the case of the original program which had to undergo a second reorganization and a reduction in schools and classes as late as December to avoid non-compliance with CSA guidelines.

The desired level of implementation was considered partially attained overall in the original program. All statements regarding implementation, however, especially those affecting the instructional component, must be judged in the light of the year's special negative circumstances. The Bank Street and Behavior Analysis Models continued to represent relatively high levels of fidelity to model ideals. The Philadelphia Process, and the single-school Parent Implemented Model which uses the former's instructional approach, came closest to equalling the implementation level of the two first-named models. EDC implementation was good. The Bilingual Model continued to improve in implementation especially in the school most in need in this regard. The Florida Parent Education Model ceased affiliation with Philadelphia during the year, and the single remaining school under the former model is to become a Behavior Analysis school in Fall, 1978. The objective proposed for the original program in the instructional area was not attained; data for this objective appear to confirm the negative impact of the year's events.

Instructional implementation in the expansion program was satisfactory for the most part despite the overall negative environment and even though third grade was included for the first time. Four original program schools were moved into the expansion program during the reorganization and have adopted one of the latter's instructional "options." Option IV, derived from the Bank Street Model, possibly because of its familiarity to teachers is the best implemented overall, followed by Option I, a derivative of the Behavior Analysis approach. The expansion program's instructional objective was considered partially attained.

Although parent involvement efforts began to be renewed in the course of the year, they were not sufficient to overcome the earlier problems occasioned by the educational deprivation ruling, as is evident from the non-attainment of the objective in this area.

The supportive services component has been bolstered by increased medical and dental screenings provided by School District Health Services. The social services area suffered from extensive personnel cuts initially, and only gradually recovered a substantial amount of former operating levels during the course of the year.

This year is perhaps best regarded as a transition phase for both the original and the expansion programs. The educational deprivation ruling had widespread negative effects on implementation and attainment of objectives and the year to come will probably serve as the best judge of how adaptive both programs' operations will be to the new circumstances.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

This Title I project consists of the separate programs of 10 different custodial care institutions.

RATIONALE

Many pupils under the care of institutions participating in this project are from culturally deprived backgrounds; their basic skills in reading, mathematics, and other subjects lag far behind the national norms for their ages and grade levels. Therefore, Title-I-eligible institutionalized pupils who either attend school within the institution or attend public or private schools receive additional reading and/or mathematics instruction. They may also receive other services related to those subjects.

EXPECTED OUTCOMES

It is expected that participating children will improve in reading and/or mathematics skills. In addition, it is hoped that the children will improve in their attitudes toward themselves and others, and in social skills facilitating acceptable interaction with both adults and peers.

PREVIOUS FINDINGS

Past evaluations (1968-1977) showed that the contracted services were being provided by the institutions receiving funds. During the 1976-1977 school year, all of the institutions provided basic skill programs in reading and/or mathematics. Moreover, each program began to develop appropriate evaluation procedures for monitoring individual pupil progress

EVALUATION OF THE CURRENT YEAR

Evaluation of the Institutions for Neglected and Delinquent Children project during the current year focused on the respective processes and accomplishments of the 10 participating institutions' programs.

IMPLEMENTATION

In 1977-1978 the project's intended mode of operation was partially implemented at the 10 regular term institutions (Association for Jewish Children, Baptist Children's House, Children's Aid Society of Pennsylvania, Girard College, Methodist Home for Children, St. Francis Vocational, St. Vincent's Home for Children, Salvation Army Ivy House, Southern Home for Children, and Youth Services) because the United States Office of Education objected to the contractual arrangements between the School District and the various institutions. Consequently, funding was delayed until these objections were satisfied. With one exception, all programs were operational by mid-January. The one institution which did not begin its program when funding was finally approved experienced difficulty in hiring a qualified teacher.

For purposes of this year's evaluation, a program was considered implemented if (a) it provided the majority of its services in the basic skills area, (b) a certified reading specialist was directly involved with a reading program, (c) detailed logs of the duration and content of instructional sessions were maintained, and (d) procedures for determining eligibility were followed.

Because many of the institutional program directors were new to their Title I positions, visits to institutions by the evaluator concentrated on familiarizing directors with Title I procedural criteria and evaluation designs. Most program directors reported a thorough understanding of their respective programs.

Association for Jewish Children

The reading specialist diagnosed, prescribed, and supervised instructional programs for each child receiving Title I services. Tutors worked individually with these children a minimum of one hour per week.

Because of the psychological and/or social problems experienced by these children, observations by the evaluator of the tutor-tutee relationship seemed inappropriate.

Instructional logs describing the content of sessions for each student were available for review by the evaluator.

Baptist Children's House

Services to eligible children consisted of five reading programs and three mathematics programs. The reading programs were supervised by reading specialists who worked with small groups and individuals. The mathematics component offered small-group instruction.

The new program director requested the Title I program staff to submit lesson plans for each session. Some instructor's plans were available for the evaluator's perusal.

Eligible Title I pupils were not able to participate in all available Title I activities because other institutional activities were scheduled concurrently with the Title I program activities.

Children's Aid Society of Pennsylvania

Reading instruction was individually administered to eligible students. Observations of the reading specialists working with pupils revealed a variety of reading materials on many differert levels and a positive pupil-teacher rapport. Extremely detailed, descriptive data on each pupil receiving instruction was updated during instructional sessions.

It should be noted that the organization, enthusiasm, and teaching skills exhibited by one of the teachers supported by positive teacher-pupil rapport and detailed anecdotal record keeping could serve as a model for other institutions.

The standardized test information showed clearly the progress achieved by the pupils.

Girard College

Reading and mathematics programs were available to both the elementary and secondary pupils. Most of the instruction occurred in small groups with attention to individual follow-up assignments.

Observations revealed a variety of instructional materials available in both the reading and mathematics programs. Pupil-teacher rapport appeared positive.

The secondary reading and mathematics instructors were located in separate rooms in which they conducted their respective classes.

The elementary personnel shared a room for both reading and mathematics instruction.

A separate room for each elementary subject-area might eliminate some of the distractions created by the sharing of a single room for mathematics and reading. Observations revealed Title I services were not always available because of scheduling difficulties. Perhaps separate rooms for the elementary mathematics and reading programs and a revised schedule would aid in providing a more efficient program.

Methodist Home For Children

Some children received reading instruction from a reading specialist; other children received assistance and support from individuals who were supervised by the reading specialist. Observations revealed eligible children usually received individual instruction using appropriate materials.

Observations of the program and discussions with staff members revealed that, at times, designated Title I pupils were scheduled for other institutional activities and were not always able to be present for their Title I instruction. It would seem appropriate that future consideration be given to eliminating these conflicts in scheduling in order that students might receive the complete Title I service available.

St. Francis Vocational

Individual mathematics instruction was provided in two separate residences. Instructional strategies were determined by the results of a diagnostic mathematics test. In addition to requested test results, descriptive information was also provided to the evaluator.

The program served a small number of pupils and it can be noted that the program director and case worker provided the evaluator with additional educational and psychological information for each student.

St. Vincent's Home for Children

Language arts instruction to kindergarten and first-grade pupils was given by two certified elementary teachers. Pupils received both individual and small-group instruction in basic reading areas and oral language development.

Observations revealed the teachers' thorough understanding of the available materials and the positive pupil-teacher rapport.

Salvation Army Ivy House

When contractual difficulties between the School District and the United States Office of Education were finally resolved and programs began, this institution experienced a further delay because of difficulty in hiring a reading teacher.

Usually pupils were individually scheduled for reading instruction. Three teachers shared the responsibility for the program.

Southern Home

The reading specialist was responsible for the testing and prescriptive program for eligible pupils. Observations revealed that, at times, the scheduled

Title I pupils were commited for other activities and were not always able to be present for instructional sessions.

Instructional personnel when observed, appeared to have a positive pupil-teacher rapport. Even though logs of attendance and content of sessions were not available to the evaluator, the two instructors observed appeared to have a thorough knowledge of the strengths and weaknesses of pupils for whom they were responsible.

Youth Services Inc.

Eligible pupils received reading and mathematics instruction in a quiet well-lighted school facility removed from the residence cottages, which, in years past, proved unsuitable for instruction.

Group instruction was planned for two hours per evening, four days per week. However, because of problems at the residence cottage and/or transportation arrangements, the entire time scheduled for pupils was not always received. Logs indicating attendance and content of sessions were not available to the evaluator during observations. A positive teacher-pupil rapport was apparent with some of the instructors observed.

ATTAINMENT OF OBJECTIVES

Objective 1: Each institution which provides mathematics instruction in this project will provide it form October to June to its underachieving children for a minimum of one hour per week per child. Detailed logs of the duration and content of each session will be maintained.

This objective was considered partially attained because of delayed starting dates at all institutions. The United States Office of Education objected to the contractual arrangements between the School District and the various institutions and, as a consequence, funding was not approved until mid-January. By February 1, programs were operational with minor revisions. At several institutions logs describing duration and content of instructional sessions were found to be incomplete.

The Institutional Program Information Form was forwarded to all institutions during the Fall by the evaluation team. The form requested information pertaining to the time devoted each week to the instruction of mathematics for each child.

Those institutions which provided mathematics services (Association for Jewish Children, Baptist Children's House, Girard College, St. Francis Vocational, Southern Home for Children, Youth Services, Inc.) provided a minimum of one hour per week per child.

During observations and program visitations those institutions where detailed logs were generally used as the basis for instruction included Association for Jewish Children, Baptist Children's House, and St. Francis Vocational.

Objective 2: Each institution which provides reading instruction in this project will provide it from October to June to its eligible children for a minimum of one hour per week per child. Detailed logs of the duration and content of each session will be maintained.

This objective was considered partially attained because of the reasons specified in the discussion for Objective 1. By February 1, seven of eight programs were operational with minor revisions. At several institutions, logs describing duration and content of instructional sessions were found to be incomplete.

The Institutional Program Form was forwarded to all institutions during the Fall by the evaluation team. The form requested information pertaining to the time devoted each week to the instruction of reading for each child.

Those institutions which provided reading services as scheduled (Association for Jewish Children, Baptist Children's House, Children's Aid Society of Pennsylvania, Girard College, Methodist Home, St. Vincent's Home for Children, Youth Services, Inc.) provided a minimum of one hour per week per child.

The one institution (Salvation Army Ivy House) which did not begin its program when funding was finally approved, experienced difficulty in hiring a qualified teacher. In early March, when a suitable reading teacher was located, the program became operational.

During observations, it was apparent that the required detailed logs maintained at Children's Aid Society of Pennsylvania were the basis for individual pupils' lessons including instructional reading techniques, strategies, and materials. Indeed, this program functioned smoothly.

All institutions providing reading services were staffed by certified reading specialists. Some of these specialists worked with children directly and/or supervised other instructors.

Objective 3: Students receiving at least five weeks of mathematics instruction in this project during the 1977-1978 school year will improve thier basic mathematics skills to the extent that teachers, using the Institutions Skill Record for Mathematics at the end of the students' respective participation in the project, will rate 75% of them as having gained additional knowledge of fractions, geometry, addition, subtraction, word problems, multiplicaton and/or division.

This objective was fully attained in all seven areas investigated.

The Institutional Skill Record for Title I Mathematics Programs was completed for each child receiving a minimum of five weeks of instruction at his/her institution. Each teacher was directed to rate the progress of each child in mathematics instruction listed on the form by selecting one of the following ratings: "Additional knowledge gained," "no progress," or "area not covered." These ratings were determined from the results of various standardized and/or criterion-referenced tests administered at each institution.

An analysis of data revealed that the 75% criterion was attained in the areas of fractions (78%), addition (85%), subtraction (84%), word problems (77%), geometry (96%), multiplication (97%), and division (95%).

Objective 4: Students receiving at least five weeks of reading instruction in this project during the 1977-1978 school year will improve their basic reading skills to the extent that teachers, using the Institutional Skill Record for Reading at the end of the students' respective participation in the project, will rate 75% of them as having gained additional knowledge of word recognition skills, comprehension, and/or oral reading.

This objective was fully attained. The 75% criterion was attained for all the areas investigated.

The Institutional Skill Record for Title I Reading Programs was completed for each child receiving a minimum of five weeks of instruction at his/her institution. Each teacher was directed to rate the progress of each child by checking one of the following ratings for each category of reading instruction listed on the form: "additional knowledge gained," "no progress," or "area not covered." These ratings were determined by the results of various standardized and/or criterion-referenced tests administered at each institution.

An analysis of the data revealed that the 75% criterion was attained for word recognition skills (95%), comprehension (94%), and oral reading (88%).

SUMMARY AND CONCLUSIONS

The Institutions for Neglected and Delinquent Children project was established to meet the needs of institutionalized children, who, because of neglect and/or delinquency, have severe academic, social and/or cultural deficiencies. The project's intended mode of operation was partially implemented at all ten institutions because of circumstances beyond the institutions' control.

The United States Office of Education objected to the contractual arrangements between the School District and the various institutions. Consequently, funding was delayed until these objections were satisfied. By February 1, all programs but one were operational with minor revisions.

Programs varied widely from institution to institution and included educational activities integrated within each institution's regular school day. Tutoring activities took place during or after school. All programs involved either professionals and/or highly qualified volunteers supervised by a specialist in the subject area. Students received instruction individually or in small groups.

Nine of the ten institutions provided after-school tutorial services. They were Association for Jewish Children, Baptist Children's House, Children's Aid Society, of Pennsylvania, Methodist Home for Children, St. Francis Vocational, St. Vincent's Home for Children, Salvation Army Ivy House, Southern Home for Children, and Youth Services. Girard College provided services during the regular school day.

The objectives dealing with students' gains in reading and/or mathematics skills were fully attained. The objectives addressing the length of time programs would operate and the maintenance of detailed logs noting duration and content of each session were partially attained. Proposed reading and/or mathematics services were provided to eligible children and at least 75% of the children receiving these services were reported to have gained additional knowledge.

LEARNING CENTERS

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Learning Centers project provides a model of supportive teacher behavior and classroom organization which utilizes an informal, individualized laboratory approach. Through the use of educational aids, activities, and games, pupils are given self-chosen experiences in basic skill areas. Teachers, parents, and administrators from target schools are served in workshops and consultations.

RATIONALE

Children from target areas tend to have low self-images, and deficiencies in oral language skills and inquiry techniques. They lack skill in symbolizing and in inductive thinking. The Learning Centers project provides these children with a learning atmosphere structured to correct their deficiencies through an activity-centered approach.

EXPECTED OUTCOMES

It is expected that the learning atmosphere will be warm, caring, and non-punitive. Pupils should improve in basic skills, in oral and written communication, and in physical, motor, and manipulative abilities. They should become contributing members of a group, and develop an understanding of themselves and their relationship to society. The pupils should learn to make choices, to be self-directive in learning and to be independent. Also, their creative and aesthetic expression should increase.

PREVIOUS FINDINGS

During the four years, 1968-1973, pupils in the Peirce and Waring centers showed substantial progress in prereading, reading, and auditory vocabulary skills. The reading-achievement scores of pupils in most grades at the Durham center were found to be higher than the District 2 norms.

Since 1973 the project has succeeded in meeting a variety of pupil academic achievement objectives. LC pupils exceeded comparable nonparticipating pupils in the development of skills in problem solving, mathematics-concept formation, and written communication.

Since 1973, the large numbers of teachers, parents, and administrators who voluntarily sought assistance in either the Teacher-Parent Center or the Learning

Center Headquarters, and the positive responses to the Teacher Center Survey, were interpreted as an indication of both the need for and the success of these components of the project.

The Learning Centers project currently encompasses three components: Learning Center Laboratories which provide direct instruction to students in selected schools; a Teacher-Parent Center which assists teachers, parents, aides, and administrators in constructing educational games, developing instructional skills, and devising manipulative activities; and a Traveling Teacher Center which provides similar training at various school sites.

EVALUATION OF THE CURRENT YEAR

The three components of the Learning Centers project are evaluated by observations of activities, and self-reports by the participants. A checklist for the Learning Laboratories provides detailed information on both cognitive and affective outcomes of the instruction. The evaluation of the Teacher-Parent Center and the Traveling Teacher center solicits the opinions of the participants concerning the usefulness of the activities and suggestions for their application.

IMPLEMENTATION

Of the 10 LC laboratories operating in nine schools, nine labs were primarily geared to mathematics skill building; one to communication skill instruction. Of the nine labs geared to mathematics skill building, one lab provided some flexibility in its program by allowing pupil exposure to skill building in other areas (reading, language arts, etc.).

During 18 visits to the Labs, the majority of the teachers were observed using concrete mathematics teaching aids (hundred boards, Cuisenaire rods, metric weights, etc.). The labs were generally organized to enhance small group and individual types of activities. Pupils were given a choice of activities, each of which was geared to basic skill building in some particular discipline. While activities in the math labs focused on basic mathematics skill building (addition, subtraction, etc.), the communications lab was concerned with the basic elements of grammar, photography, public speaking, and creative writing. This phase of the program was enhanced by the assistance of a television/electronics media specialist who worked closely with the communication skills teacher in providing pupil exposure to television broadcasting and recording technology.

Approximately 6,247 teachers, aides, administrators, and other personnel from Title I schools and projects visited the Center at the Durham School during the 1977-1978 school year. Participants were involved in a diversity of activities ranging from making classroom furniture to learning new teaching strategies. Activities at the Durham center were divided primarily into three areas: group workshops, individual observation days, and after school Saturday activities.

Group workshops were usually content area workshops requested by Title I project directors for their staff. Individual observation days provided teachers with an opportunity to develop teaching materials of their own choice. After school Saturday activities basically provided teachers with extra time to work on individual projects and to pursue in-service courses. During the 1977-1978 school year, two in-service courses were held (Individual Instruction and Madison Mathematics), thus allowing teachers to earn 3 or 2 credits.

Approximately 2,142 teachers, aides, and administrators participated in 58 in-school workshops conducted by the staff in areas such as tri-wall furniture, educational games, and bookmaking. Specific workshops were designed for such special groups as Parent-school aides, Project Bridge aides, Child care center workers, Teen tutors, and Mathematics Resource teachers.

ATTAINMENT OF OBJECTIVES

Objective 1: Pupils in Learning Center Labs, on the average, will gain at least one (1) instructional level in total mathematics ability as evidenced by 80% mastery on the respective Philadelphia Mathematics Evaluation Tests administered in September 1977 and May 1978.

This objective was attained.

Pupils from nine Learning Center labs were administered the Philadelphia Mathematics Evaluation Tests in September, 1977 and again in May, 1978. An analysis of the test data revealed that of the 664 pupils taking the test in September and again in May, 89% gained at least one instructional level. The average gain was 1.7 levels, which exceeded the expected gain of one (1) instructional level.

Objective 2: The Teacher-Parent Center staff will provide 20% more on-site workshops for teachers and parents from September, 1977 to May, 1978 than they provided from September, 1976 to May, 1977 in which basic teaching materials and classroom furnishings will be made by participants as indicated by a log kept by the Center staff.

This objective was attained.

An analysis of the Teacher-Parent Center log revealed that the center staff conducted fifty-eight (58) on-site workshops during the 1977-1978 school year, as compared to twenty-five (25) during the 1976-1977 school year. This represented an increase of over 100%, exceeding the criterion of a 20% increase. Visits to the workshop sites by the evaluator revealed that teachers, aides, and other school personnel were aided by Center staff members in the construction of a variety of classroom furnishings, basic teaching materials and educational games.

Objective 3: Teachers and teacher aides who attended workshops conducted by the Teacher-Parent Center will rate the center's effectiveness as a source of continuous professional growth and development, as determined by their responses to the Teacher-Parent Center questionnaire.

This objective was attained.

To assess the effect of the Teacher-Parent Center on the professional growth and development of those attending the Center, a questionnaire was developed by the Center staff and the evaluator. Questionnaires were mailed to ten (10) percent of the participants who attended one or more workshops between September, 1977 and March, 1978 (N=4000). Sampling was done randomly.

Responses on the questionnaires indicated an overwhelming approval of the Center workshops as sources of continued professional growth and development. Of the teachers and aides responding to the questionnaire, 98% rated the workshops "good to outstanding" as sources of new ideas, 93% rated the workshops' help in improving their classroom organization and planning as "good" to "outstanding," 97% rated the workshops' help in introducing new ideas in the classroom as "good" to "outstanding," and 98% rated the workshop experiences as stimulating factors in creating new materials as "good" to "outstanding."

Table 1 presents a summary of the 272 Teacher Parent Center questionnaires returned by center participants to the evaluator in Spring 1978.

Objective 4: Participants in the on-site workshops of the Traveling Teacher Center (TTC) will find the activities of the workshops relevant to their needs as evidenced by a favorable response of greater than 50% on an opinionnaire distributed to all participants.

This objective was attained.

A Likert-type rating scale was used by the participants to rate the workshops from "not helpful" (1) to "very helpful" (5). In the 13 schools in which workshops were held, 165 of 198 participants, or 83%, gave the workshops the highest rating (5); 12% described the workshops as "helpful" (4); 4% responded that they were average (3). No ratings fell below average. The mean rating of the TTC, 4.77 out a possible 5.0, also indicated widespread perception of the helpfulness of the activities. The classroom teachers, teaching specialists, aides and others in attendance, voluntarily spent more than 1½ hours, on average (mode), at the TTC.

SUMMARY AND CONCLUSIONS

The Learning Centers project fully implemented its three components: the Learning Centers laboratories, the Teacher-Parent Center and the Traveling Teacher Center.

Ten Learning Center labs provided manipulative learning experiences in basic arithmetic, problem solving, and communication skills. The Teacher-Parent Center assisted teachers, aides, parents, administrators, and other school personnel from Title I schools and projects in the construction of educational games, manipulative teaching aides, and classroom furniture and in the teaching of basic educational skills. The Traveling Teacher Center provided a more intensive and concentrated version of the Teacher-Parent Center, operating in 17 off-site school locations.

All of the project's four objectives were attained.

Pupils in the Learning Center labs exceeded the expected levels of performance in basic arithmetic skills (as measured by the Philadelphia Mathematics Evaluation Test) by averaging a 1.7 levels gain in mathematics skills. The Teacher-Parent Center staff conducted 58 on-site workshops during the 1977-1978 school year, compared to 25 during the 1976-1977 school year, thus exceeding the expected goal of a 20% increase. Ninety-seven (97) percent of the respondents to the Teacher-Parent Center questionnaires rated the center "good" to "outstanding" in providing services that enhanced professional growth and development in a variety of areas. Participants in the on-site workshops of the Traveling Teacher Center found the activities of the workshop relevant to their needs, as evidenced by 83% of the participants rating the workshops as "very helpful."

MOTIVATION

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Motivation project offers tenth-, eleventh-, and 12th-grade students a wide variety of cultural enrichment, curriculum enrichment, and tutoring experiences designed to motivate them to seek post-high school education, particularly in a college.

RATIONALE

The Motivation project seeks to remedy seven educational needs of Title I children, which are noted in the Guidelines for Title I projects: (a) improvement of basic skills, (b) knowledge for living in modern American society, (c) experiences which motivate learning, (d) standard English speech, (e) heightened aspiration and motivation, (f) an understanding of the purposes of education, and (g) teachers who understand their pupils' problems.

The Guidelines note also that "a greater proportion of educationally deprived youngsters in low-income areas [should] not only be given a better chance of getting to college but also be equipped psychologically and educationally for success in college." The Motivation project is the only Title I project in Philadelphia whose primary goal is preparing students for college.

EXPECTED OUTCOMES

It is expected that students will gain entrance into college and will have a sufficiently solid academic foundation to succeed in college.

PREVIOUS FINDINGS

Previous years' evaluations showed desirable results in the following areas: classroom performance, verbal and nonverbal functioning, occupational and educational aspiration levels, expectations of success, basic skills, parental involvement, attitudes toward school and learning, attendance rates, retention rates, college applications, and college acceptances. Motivation students were entering college at rates higher than would be predicted from their standardized test scores. A higher percentage of Motivation graduates attended programs creditable toward a college degree than high school graduates nationwide. Project parents expressed positive attitudes toward Motivation, and all project teachers reported constructive changes in their own attitudes toward students.

EVALUATION OF THE CURRENT YEAR

The current evaluation of the Motivation project examined the students' attendance and academic progress in high school and their admissions to colleges and universities.

IMPLEMENTATION

The Motivation project was fully implemented in accordance with the intended mode of operation. At all 11 participating schools, the program provided academic enrichment in English and mathematics as well as tutoring, counseling, cultural activities, and parent involvement activities. Though the components of the program were visible in all the schools, implementation varied slightly according to site.

Generally, students were block-rostered and received five extra periods a week in mathematics and/or English. There was a counselor at each site whose sole responsibility was to provide service to the Motivation students. Tutoring also was available in varying amounts at each site. Due to budgetary problems this year, Cultural Organizers who formerly worked full-time, were employed only three days per week.

Despite the reduction in the Cultural Organizers' services, the project still offered students extensive cultural enrichment. Students attended cultural events such as operas, plays, museum exhibits, lectures, and movies; and they were encouraged to watch educational shows on television and to participate in other individual activities. They were encouraged to relate these experiences to topics discussed or read in class.

In order to assess student satisfaction with the Motivation program, a small sample (82 students) was interviewed this year. Students seemed generally satisfied about being in the program, and they liked the concern shown them by the Motivation teachers. Most of them indicated that they were working harder in school as a result of the extra periods of mathematics and English, but they also felt that these extra classes were necessary for college preparation.

ATTAINMENT OF OBJECTIVES

Objective 1: By June 10, 1978, at least 75% of the twelfth-grade Motivation students will be accepted for admission to colleges or universities.

This objective was considered attained.

Of the 582 Motivation seniors, 74.4% were accepted for admission to colleges or universities. Since this percentage was less than one point below the criterion (75%), the objective was considered attained. Motivation coordinators indicated that more college acceptances were expected by the end of June.

Objective 2: The average daily attendance rate of eleventh- and twelfth-grade Motivation students will be at least 10 percentage points higher than that of non-Motivation students in the same grades and schools.

This objective was attained.

Motivation students in both 11th and 12th grades exceeded the attendance criterion. Eleventh-grade Motivation students' percentage of attendance was 91%. This exceeded the percentage (71%) for other eleventh-grade students in the same schools by 20 points. For twelfth-grade students, the Motivation attendance rate was 88% which exceeded that (74%) of the other 12th-grade students by 14 points.

Objective 3: At least 50% of the eleventh- and twelfth-grade Motivation students will maintain or improve the National Percentile Ranks of their Total Mathematics scores on the California Achievement Tests from 1977 to 1978.

This objective was attained.

For a random sample of eleventh- and twelfth-grade Motivation students, the California Achievement Tests Mathematics Concepts subtest scores were compared for 1977 and 1978. The Mathematics Concepts subtest was not administered in 1977, consequently the Total Mathematics scores could not be compared.

Slightly more than half (50.5%) of 200 eleventh-grade students maintained or improved percentile ranks from 1977 to 1978. Of the 201 twelfth-grade students, 63% maintained or improved their national percentile ranks.

SUMMARY AND CONCLUSION

The Motivation program was fully implemented in 1977-1978 despite staff reductions caused by budgetary constraints. A group of randomly selected project students stated that they felt special about being in the program.

Two objectives were attained, and one was considered attained. Eleventh- and twelfth-grade Motivation students' attendance rates surpassed those of other students in the same grades and schools. Mathematics Computation subtest scores were maintained or improved by over half of the Motivation students in 11th and 12th grades. Also, 74.4% of the twelfth-grade Motivation students were accepted to college, and coordinators indicated that more acceptances would be forthcoming by the end of June.

MULTIMEDIA CENTER

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The Multimedia Center is a clearinghouse and service center providing teachers and students in Title I schools with curriculum-related audiovisual and other instructional materials.

RATIONALE

Regular classroom instruction in Title I schools must be supplemented by meaningful sensory experiences. Research has shown that Title I children need instruction which appeals to their immediate concerns, utilizes concrete rather than abstract examples, and involves their direct participation.

The Multimedia Center meets the children's needs by providing teachers with various audiovisual and other instructional materials to be used in a multisensory approach to learning.

EXPECTED OUTCOMES

The Multimedia Center is expected to provide Title-I-eligible students and teachers with materials meeting their specific curricular needs. In addition, the center will provide in-service training in the use and maintenance of audiovisual equipment.

PREVIOUS FINDINGS

On surveys, participating school personnel have indicated highly favorable attitudes regarding the center's operation and that the materials from the center were incorporated into the ongoing classroom activities. Usage was heaviest in the primary grades and in reading and social studies.

EVALUATION OF THE CURRENT YEAR

During the current year, evaluation of the Multimedia Center project focused on (a) the manner and extent to which teachers used the center's materials, and (b) the amount and impact of in-service training of paraprofessional aides and students.

IMPLEMENTATION

The evaluator's observations of the participating schools and the administrative center indicated efficient and effective implementation of the Multimedia Center project's proposed services, as stated in the Title I application.

The center catalog listed 1,882 different items for circulation among the participating schools during periods ranging from one week to an entire semester. The center had three to five copies of each item, with the exception of films where only one copy of each film was available for circulation. A contracted trucking service provided weekly pickup and delivery services to the schools. The project also had 1,766 pieces of audiovisual equipment housed on a continuing basis in the participating schools.

During the school year, the project coordinator provided a selected number of parent aides and 6th-grade students with in-service training in the classroom use of audiovisual/instructional materials.

The project evaluator visited 18 schools and interviewed the principals, teachers, and parent aides asking questions which were directly concerned with the implementation of the project's intended services. Periodic meetings were also held with the Multimedia Center coordinator for the same purpose. It was found that these services were being implemented, appropriately and efficiently.

ATTAINMENT OF OBJECTIVES

Objecitve 1: During the current school year, the Multimedia Center will provide audiovisual and other instructional materials that are related to the curricular needs of educationally deprived pupils. It is expected that the teachers will use an average of 20 materials during the year, as measured by the Multimedia Center Survey.

This objective was attained.

The Multimedia Center filled 4,772 requests from its circulating materials during the 1977-1978 school year. A summary of software items circulated during this period is shown in Table 1.

The Multimedia Center Survey was sent to teachers representing 15 schools (these schools were randomly selected from the list of 47 schools participating in the Multimedia Center project). Of the 160 teachers to whom survey forms were sent, 157 responded to the survey and 142 answered questions about the extent of their use of Multimedia Center materials. The following is a summary of teacher responses:

(1) When asked to indicate how they used the Multimedia Center materials, 43% of the teachers replied "to reinforce or review subject matter already taught;" 42% replied "to supplement or enrich classroom work;" 7% replied "to introduce subject matter;" 6% replied "to provide content information;" and 2% replied "other."

(2) When asked how well they thought the center was fulfilling the first part of Objective 1, 43% of the teachers responded "extremely well;", 51% responded "fairly well;" 4% responded "just well enough to be considered adequate;" 2% responded "poorly or inadequately;" and 1% responded "not at all."

(3) The average teacher reported using 23 different items from the Multimedia Center during the 1977-1978 school year. This exceeded the anticipated use of 20 materials, as stated in the above objective.

Objective 2: During the school year, the coordinator of the Multimedia Center will provide paraprofessional aides with a minimum of 2½ hours of in-service training in the classroom use of audiovisual and other instructional materials. An activity log of the training will be maintained by the coordinator.

This objective was attained.

The coordinator invited principals from participating schools to select parent aides from their respective schools to receive training in the operation of audio-visual equipment and in the classroom use of audiovisual and other instructional materials. Five principals requested training for a total of seven aides. Training was conducted at the requesting school by the Multimedia Center coordinator in late April, 1978. At least 2½ hours of individual and small-group training was given in the operation, care, and appropriate use of audiovisual equipment and materials. An activity log of the training was maintained by the Center coordinator.

The seven aides who received the training were asked to respond to the Multimedia Center In-Service Training Questionnaire. All responded that their training included the operation and care of audiovisual equipment and the classroom use of such equipment and other instructional materials. All rated their training as "excellent" on a five-point scale of "poor" (1) to "excellent" (5).

Objective 3: During the school year, the coordinator of the Multimedia Center will provide 6th-grade students, selected by their schools for participation in the Cadet Corps, with a minimjm of 1½ hours of training in the use of audiovisual hardware. An activity log of the training will be maintained by the coordinator.

This objective was attained.

The coordinator invited principals of the participating schools to recommend 6th-grade students in their respective schools for specialized training in the

basic operation of audiovisual equipment. Principals of 33 participating schools recommended a total of 134 students who received such training at their respective schools. The training was conducted by the Multimedia Center coordinator and the selected students received two hours of instruction in the use of audiovisual hardware. An activity log of the training was maintained by the Center coordinator.

Principals of the trained students were asked to respond to the Principals's Evaluation of Cadet Corps questionnaire in late May, 1978. Of the 31 respondents. 15 rated the Cadet Corps performance as "excellent," 13 rated the performance as "good," two rated the performance as "average," and one gave no rating. (A five-point scale of 1 ("poor") to 5 ("excellent") was used.)

SUMMARY AND CONCLUSIONS

The Multimedia Center project was fully implemented in harmony with its Title I application. The project continued its program of circulating audiovisual and other instructional materials to participating non-public Title I schools. It provided and maintained audiovisual hardware for classroom presentations of these materials. Additionally, the Multimedia Coordinator trained paraprofessional aides and students in the operation of the equipment.

The center filled 4,772 requests from its circulating materials during the 1977-1978 school year. The average teacher reported using 23 different items, primarily to supplement or reinforce ongoing classroom instruction (especially in reading and language arts). Of the 142 teachers responding to an evaluative question on the Multimedia Center Survey, more than 89% indicated satisfaction with the project's services.

At least 2½ hours of individual or small-group training in the operation, care, and use of audiovisual equipment and materials was given by the Multimedia Center coordinator to seven parent aides, designated by their respective principals from five participating schools. All of the aides gave their training the highest rating ("excellent") on a 5-point rating scale.

Small-group training sessions, averaging two hours in duration were presented to 134 6th-grade students, designated by their respective principals, representing 33 participating schools. Over 90% of the principals responding to the Principal's Evaluation of Cadet Corps questionnaire rated the trained students' performance as "good" to "excellent".

PRESCHOOL CHILD DEVELOPMENT PROJECT

The Preschool Child Development Project is designed to serve young children 3 years to 5 years 7 months who are of different ethnic backgrounds and reside in an ESEA Title I eligible school attendance area. The program, presently operating at the H.A. Brown School in District Five, employs a variety of proven early childhood intervention strategies in the promotion of cognitive, social, physical and emotional growth.

RATIONALE

There is a need for a specially constructed program, for a multi-ethnic, Title I eligible, population in Philadelphia, that is able to provide a consistent developmental approach based on the most effective techniques and materials available.

The Preschool Child Development Project was established to be responsive to that need. The project allows each child to develop his or her strengths and abilities in Language, Mathematics, and Science and Social Studies areas through exploration, discovery, experimentation and reinforcement of experience. Teachers head Child-Centered classes, directing the activities of a multi-adult setting in providing a form of instruction geared to each child's needs and potential. The instructional component is bolstered by provision for constructive social interaction, and nutritional and health services.

EXPECTED OUTCOMES

The Preschool Child Development Project has (1) separate classes, [illegible] within the prekindergarten level, and at the kindergarten level, (2) ve[illegible] child-adult ratios, (3) classrooms functioning to enhance the "whole chi[illegible] concept, offering a variety of activities for individual and small group i[illegible] cultural enrichment and reinforcement of basic life concepts, (4) comp[illegible] staff development for full-time and volunteer personnel, (5) a special emph[illegible] is on parent involvement, and (6) special provisions for health and nutrition. This kind of consistent, all-encompassing support is expected to produce a minimum of areas of developmental delay at the pre-kindergarten level, as measured by a developmental status instrument, high performance at the kindergarten level, as measured by standardized tests, and documented provision of special services, as recorded on key indicator forms developed for this purpose.

PREVIOUS FINDINGS

There were no previous findings because this was the first year of the project.

EVALUATION OF THE CURRENT YEAR

The project will be evaluated by members of the Early Childhood Evaluation Unit (ECEU) and will be included in the comprehensive evaluation design employed by the ECEU which conducts data collection, analysis, and reporting operations in the following four major early childhood program component areas:

I. Educational/Developmental Component: focus is on (a) Classroom Observation, (b) Developmental Status, (c) Achievement, both cross-sectional and longitudinal;

II. Parent Involvement Component: special recording forms are used;

III, Staff Development Component: specially developed questionnaires are used; and

IV. Supportive Services Component: special recording forms are used.

IMPLEMENTATION

During 1977-1978, the project's intended mode of operation overall was partially implemented.

This is a new program at the Brown School in District 5 designed to serve young children 3 years to 5 years, 7 month old, who represent different ethnic backgrounds. During this first year, which was a half-year in reality due to the unavoidably late start, the program served approximately 70 children in three classes, one each for a nursery-age group (3-4 yr. olds), prekindergarten group (ages 4-5), and a kindergarten group.

Information regarding implementation was obtained from the Project Coordinator and the principal of the school as well as from observation data using the Prekindergarten Observation Form (PKOF). The PKOF is a locally developed instrument extensively pilot-tested four years ago and employed throughout School District affiliated prekindergarten programs for the past two years. It yields information on staffing and pupil grouping patterns, developmental media, teacher/adult classroom roles, and areas of developmental emphasis. Evaluation staff made five visits to each of the three classes during Spring, 1978. Since this is the first year of the program and it only became fully operational the second half of the year, the observation data should be regarded as initial baseline information to be interpreted with caution.

The project was fully operational as planned by the end of the school year, but it must be considered as having only partially attained its intended mode of operation overall because of the long delays in getting underway. The two teachers and three aides needed to complement the school's existing kindergarten teacher in order to have full staffing for the program were unable to be appointed until

mid-January. It was also late in the school year before all necessary materials and equipment were on hand and the project coordinator could establish a consistent form of staff development.

The project envisions teachers heading multi-adult, child-centered classes in which each child is allowed to develop his or her strengths in the cognitive, social, physical and emotional domains. During the observations this Spring a teacher and an aide were observed 100% of the time in each room; parent volunteers were observed one-third of the time -- special parent training activities have been initiated; and the average adult/child ratio was 1:10. Two-thirds of the time classroom activities were being conducted in four or more small groups; whole group activities occurred the remaining 1/3 of the time. A variety of materials were observed in use at each visit. The developmental emphases of the program appeared to be: social development and rapport, ideation - math/logic, language - vocabulary, social responsibility - self-help, and gross motor. In comparison with previous years' findings on the PKOF in other programs, there was less teaching (either direct or indirect) or nurturing, and more story-telling and song-leading along with a considerable amount of organizing and structuring of children's activities to keep them within the bounds of acceptable behavior. In summary the observation data, though collected on an initial basis, it must be remembered, lend a good deal of support to the conclusion that the program was fully operational by the end of the year.

Each project child at the nursery and prekindergarten level has been entered into the Early Childhood Evaluation Unit's computerized Prekindergarten File (PKF) system for longitudinal tracking during their school careers.

ATTAINMENT OF OBJECTIVES

The first objective became inapplicable, as will be explained below. Data for the second objective were obtained from the February 1978 administration of city-wide tests, which includes the Stanford Early School Achievement Test (SESAT) at kindergarten. Information for the third objective was obtained from program records for each child.

Objective 1. A smaller percentage of prekindergarten pupils in the project will show signs of developmental delay in cognitive areas of the post -- than on the pre-administration of the Learning Accomplishment Profile (LAP).

This objective must be considered not applicable at this point because of changed circumstances long after the objective was formulated. In the observed activities section above it was noted that the project was not completely underway until the second half of the year; this situation precluded pre-collection of developmental status information, as called for in the objective. In addition, at the beginning of 1977-1978 program personnel opted for a different developmental status instrument to replace the LAP. The Developmental Behavior Checklist (DBC), in many ways a briefer, more refined version of the LAP approach, was selected instead. Year-end DBC data are available, but without any pre-counterpart.

Based on DBC results at the end of the year, the following information is pertinent to the objective: (a) developmental status records were completed for a total of 41 prekindergarten children in the project; three children were in the 2.11-4.0 year old range, 17 in the 4.1-4.8 range, and 21 in the 4.9-5.10 category, and (b) 33 of the 41 children (80%) showed no signs of developmental delay as operationalized for the DBC. The instrument has seven subareas: gross motor, fine motor manipulation, fine motor/writing, social, self-help, cognitive and language. This is the first year the DBC has been used in this and any other prekindergarten program in the city. As data accumulate over the years and normative data are established, stable cut-off points will be determined for "developmental delay." The term is presently used to refer to below 25th percentile performance in the group of concern in the three major developmental areas: (1) gross motor (2) social (3) cognitive.

Objective 2. A smaller percentage of kindergarten pupils in the project will score below the 50th percentile in the Letters and Sounds subtest of the Stanford Early School Achievement Test (SESAT) in February, 1978 than the total district in which the project is located.

This objective was attained. The project had only 10% of its 29 kindergarten children scoring below the 50th percentile in this subtest of the SESAT in February, 1978, while the district in which it is located had 27% of its 1271 pupils scoring below this level.

Of all 29 children, eleven scored in the 92-99th %ile range; eleven between the 80-89 %iles; two at the 77th %ile; and one each at the 68th, 54th, 48th, 30th and 18th %iles.

Objective 3. At least two-thirds of the project pupils will receive a medical screening examination during the course of the year.

This objective was attained also. All of the project children were not only screened but fully inoculated during the first half of the year prior to beginning the program.

SUMMARY AND CONCLUSIONS

This new project designed to serve a small group of young children 3 years to 5 years 7 months, who are of different ethnic backgrounds, partially attained its intended mode of operation. Full-scale operations could not begin until the latter half of the year.

Five rounds of observations in the Spring, though the data must be considered initial, baseline information, indicate the program was well on its way to expected form of functioning by the end of the year.

The project fully attained two of the three objectives for the year: only 10% of the kindergarten group scored below the 50th percentile in Letters and Sounds, much less than the total district in which it is located: and 100% of the children received medical screenings. The third objective, regarding pre-post differences in developmental status for the prekindergarten group turned out to be non-applicable in its original form; 80% of the 41 children involved, however, showed no signs of developmental delay at the end of the year on the Developmental Behavior Checklist.

During its first year of operation, then, the project, though unable to be fully operational until the latter half of the year, was very close to its intended mode of implementation by year's end, and accomplished two out of three of its objectives as stated, the third having become inapplicable in its original form due to the program's late start.

SCHOOL-COMMUNITY COORDINATOR

Readers who are cognizant of this project's previous evaluations are invited to turn directly to the section of this report entitled EVALUATION OF THE CURRENT YEAR.

The project employs community residents as school-community coordinators to work with parents, students, and school personnel in transmitting information, facilitating mutual understanding, and encouraging participation between the school and the community.

RATIONALE

Through in-school student conferences, parent conferences arranged for school staff members, and visitations to students' homes by the SCC, school problems that affect individual children's academic standing and school morale can be obviated. Many problems pertaining to students' health, discipline, attendance, or basic skills can be resolved through the coordinator's personal contacts with the home. This project also attempts to increase communication between Title-I-eligible students, their parents or guardians, and the personnel in schools who serve them.

EXPECTED OUTCOMES

It is expected that the school-community coordinator will facilitate improved communication and understanding between the school, the parents, and the community, as well as increased participation by school personnel and parents in school-community activities. But especially, an increased emphasis on service to children will allow response to many students' problems which might otherwise go unnoticed.

PREVIOUS FINDINGS

Previous SCC evaluations indicated that community residents who were visited by the coordinators were more knowledgeable about the school and participated in more school activities than those community residents who did not receive visits.

In 1975-1976, the SCCs concentrated their services on Title-I-eligible students and their parents or guardians. SCCs worked directly with individual children and their needs through in-school student contacts and out-of-school conferences. An average of 73.2 out-of-school conferences instead of 75 were held by the SCCs. Community meetings were attended and cluster meetings were sponsored in accordance with the project's stated objectives.

In 1976-1977, the project continued their thrust to provide individual Title-I-eligible pupils and their parents with services to meet their needs. It was found that fewer than 80% of the SCCs were conducting a minimum of 3.5 out-of-school conferences with parents each day.

Area coordinators provided the assistance necessary for the SCCs to follow new procedures and continued to serve as a key communication link between the neighborhood schools, the parents, the community, and local organizations.

EVALUATION OF THE CURRENT YEAR

The current year's evaluation of the School-Community Coordinator project focused on (a) the specific duties of the SCC and (b) the extent to which the SCCs achieved the specified behavioral standards. The team conducted the evaluation through on-site case studies, interviews with SCCs, and the collection of data from surveys and monthly reports submitted by SCCs.

IMPLEMENTATION

In 1977-1978, the project's intended mode of operation was fully implemented.

The evaluation team conducted half-day case studies of the activities of 15 SCCs and interviewed nine other SCCs at 21 schools. These case studies and interviews helped cross-validate monthly reports submitted by the SCCs. These reports, which detailed the out-of-school conferences, in-school pupil services, and cluster meetings held by SCCs, were collected by the evaluation team and summarized.

SCCs were observed concentrating their efforts on the problems and direct needs of individual Title-I-eligible children. In-school contacts and referrals were initiated by members of the school staff as well as by the SCCs themselves. These referrals were filed by the SCCs after follow-up services, which focused primarily on attendance, basic skills and work habits, behavior, health, and other concerns of the Title-I-eligible children.

SCCs visited the parents or guardians of Title-I-eligible pupils in their homes to inform them about school programs and services, to furnish ideas for reinforcement of their children's basic skills, and to disseminate community information directly related to family needs and problems. In addition to arranging conferences for parents with the principal and with members of the school staff, SCCs encouraged parent participation in school activities. Most SCCs took steps to involve the parents of Title-I-eligible pupils in the Parent Partnership Workshops. Feedback from SCCs and discussions with parents who attended indicated that parents became more cognizant of the methods and procedures used in assisting their children with the learning process. Furthermore, parents expressed an increased understanding of the school's educational program after their involvement in the Parent Partnership Workshops.

At least one school-community coordinator was assigned to each of 150 participating elementary and secondary schools. In 14 schools with large populations of Spanish-surnamed children, the SCC was bilingual. Bilingual SCCs often functioned as interpreters for principals, staff, and parents. In eight of the 14 schools, two SCCs provided services.

The 12 area coordinators (AC) were assigned to assist, inform, and advise an average of 13 SCCs. ACs examined the SCCs' Weekly Tally sheets which summarized weekly attendance and activities completed. This activity helped the ACs to become more aware of the SCCs weekly activities and, thereby, provide more help with their monthly work schedule. Monthly visits were made to each SCC assigned. ACs acted as a liaison between the home, school, and community. They also disseminated timely information to the parents and the community at meetings they attended.

Two supervisors (one of whom was the acting project director) met with the ACs on an ongoing basis. The supervisors also provided staff development for SCCs in three forms: (1) whole group meetings, (2) small group cluster meetings with ACs, and (3) individual meetings of SCCs with ACs at their respective schools.

The acting project administrator developed new forms and procedures which facilitated the ACs' work with the SCCs.

ATTAINMENT OF OBJECTIVES

Objective 1: School-community coordinators will complete an average of 3.5 out-of-school conferences, seven for two days, including home visits for each day of service they provide each month to participating ESEA, Title I pupils in the areas of attendance, basic skills and work habits, behavior, health and the general well-being of these students. These conferences will emanate from school or self-initiated referrals. This will be verified by inspection of monthly reports and pupil referral forms maintained by the school-community coordinators.

This objective was fully attained.

For the two sample months of November and March, the evaluators analyzed data from the monthly reports which summarized the SCCs' daily activities. The winter sample month (January) was not used this year due to the extraordianry severity of the snow storms.

During November and March, the SCCs averaged 4.1 and 3.6 out-of-school conferences per working day.

An examination of the monthly reports submitted during the two sample months indicated that coordinators received most requests for service in the area of basic skills and work habits. Attendance, which included absence, lateness,

and cutting, ranked second in requests for service in November and third in March. Behavior ranked second in March and third in November.

Objective 2: School-community coordinators will provide in-school services to a minimum of 20 participating ESEA, Title I pupils each month relative to their needs or problems. This will be verified by inspection of monthly reports maintained by the school-community coordinators.

This objective was fully attained.

Information was gathered from the data of the two sample months used for Objective 1. Monthly reports showed that the coordinators averaged 50 in-school pupil services in November and 47.4 in March.

Objective 3: School-community coordinators will provide ten cluster meetings of parents of ESEA, Title I children each year related to topics of concern of needs of the children.

This objective was fully attained.

A School-Community Coordinator Cluster Meeting Survey was conducted in May by the evaluation team. Data from 144 respondents were tabulated. The average number of parents' cluster meetings provided was 11.7.

The acting project director indicated that Parent Partnership Workshops were to be counted as parents' cluster meetings when the SCC arranged for a group of the school's parents to accompany her to these meetings. One hundred eighteen of the 144 respondents (82%) reported planning cluster meeting activites around Parent Partnership Workshops.

SUMMARY AND CONCLUSIONS

The SCCs concentrated their services on Title-I-eligible pupils and their parents or guardians. They were concerned primarily with the attendance, basic skills and work habits, behavior, health and general well-being of these pupils. Through requests for service as well as self-initiated activities, SCCs served Title-I-eligible pupils and their families by arranging for tutoring, securing clothing, food, money, and housing, and assisting in the completion of medical applications.

SCCs encouraged and arranged for active Title I parent participation in the Parent Partnership Workshops that were conducted throughout the city.

The three project objectives were fully attained. During two sample months the SCCs averaged more than 3.5 out-of-school conferences per working day -- 4.1 for one month, 3.6 for the other. The coordinators surpassed the objective of holding a minimum of 20 in-school contacts with pupils during two sample months

by holding 50 during one and 47.4 during the other. Over the school year SCCs averaged 11.7 cluster meetings for parents -- 1.7 more than the expected 10.

Area coordinators (AC) closely supervised the work of their assigned SCCs, provided assistance with scheduling of monthly activities, shared information, answered questions, and checked records. ACs and SCCs functioned as key communication links between neighborhood schools, Title I parents, the community, and local oraganizations.

The acting project director continued his role as supervisor and provided the leadership needed, with the assistance of one other supervisor.

SUMMER COMPONENTS OF TITLE I ESEA PROJECTS

Information regarding the summer components is presented substantially as the respective project administrators responded to a six-item Summer Evaluation Summary form distributed to them by the Department of Federal Evaluation Resource Services:

1. Name of Project _____
2. List the goals of the summer component of your project.
3. Describe the activities employed to attain these goals.
4. List which goals were attained and cite evidence to support your belief.
5. Describe the goals that were not attained and the reason why.
6. List programmatic changes and recommendations that will aid in the attainment of goals in future years.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN
ASSOCIATION FOR JEWISH CHILDREN
(Summer Component)

GOALS SET:

1. Children in grades 4-6 will demonstrate growth of two months of a grade level in reading and math as measured by the standardized test used in their particular school district.

2. Children in grades 7-12 will demonstrate the same improvements cited in 1.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

An individualized instructional program or small study skill groups were instituted for each child according to his needs. Directed reading activities using high-interest, low-readability level instructional materials were used. In teaching math skills consumable workbooks were used; emphasis was on the need for an application of math skills to everyday situations.

GOALS ATTAINED:

Completion of the final testing for each student has not yet been reported to cite if the goals have been attained. However, there are indications that improvement has occurred through the testing this summer. Weekly progress reports from the tutors and study skill instructors also show improvements in each child's reading and math skills.

GOALS NOT ATTAINED:

Until the completion of all the final testings, it seems premature to describe unattained goals. However, some speculations might be helpful. Because of the summer activities and limited time available for the tutors, children might not have attained as much growth as we would have liked to see.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. More available time for tutors

2. Scheduling turoring around child's available time per week and not a fixed time so child feels that it is an aid to his advancement and not an obligation.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
BAPTIST CHILDREN'S HOUSE
(Summer Component)

GOALS SET:

1. Students receiving at least five weeks of reading instruction would gain additional knowledge in word recognition, comprehension, and study skills.

2. Students receiving at least five weeks of math instruction would gain additional knowledge in addition, subtraction, multiplication, division, and word problem skills.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Individual and small group tutoring using manipulative materials, study guides, textbooks, workbooks, and worksheets. Planning and participating in field trips with activities such as reading literature pertaining to field trip sites, calculating mileage and mapping routes to and from field trip sites. Participating in quiz programs based on information from study guides and bulletin boards.

GOALS ATTAINED:

Reading goals achieved: additional knowledge gained in word recognition, comprehension, and study skills as evidenced by oral and written evaluations. Math goals achieved: additional knowledge gained in addition, subtraction, multiplication, division, and word problems as evidenced by oral and written evaluations.

GOALS NOT ATTAINED:

Not applicable.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Expanding the Title I staff would aid in allowing more individualized instruction in future years.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
CATHOLIC HOME FOR GIRLS - MATHEMATICS
(Summer Component)

GOALS SET:

1. Reinforcement and basic instruction of basic skills in addition, subtraction, multiplication, and division.

2. Application of basic skills to computation and problem solving using whole numbers, fractions, decimals, percents, algebra and geometry.

3. Individualized instruction to effect grade level requirements according to diagnosis found in Peabody Individual Achievement Test Battery.

4. Effort to increase interest in learning.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Diagnostic testing at all levels.

2. Individualized instruction according to need. (one-to-one or two-to-one pupil-teacher ratio).

3. Games and drill devices to strengthen skills.

4. Continuous Progress Kits (Elementary and Secondary).

5. Imperial Tape Program (Elementary and Secondary).

6. Evaluation tests at each level to ascertain progress.

7. Remedial help where needed.

8. Success oriented projects.

9. Pre and post tests to evaluate progress.

GOALS ATTAINED:

1. Gains in grade levels (1 year) 60% of group.

2. Motivation toward learning increased.

3. Self-image raised through achievement of success.

4. Interaction and counseling activated.

5. Speed and accuracy stepped up.

6. Pre and post tests administered throughout.

GOALS NOT ATTAINED:

Some students had low attention span and made negligible progress because of psychological circumstances and emotional problems. Their attendance and performance in the program was bolstered by extra curricular activities in art, music and cultural trips on the side.

CHANGES SUGGESTED BY PROJECT ACMINISTRATOR:

1. More cultural trips and activities will be planned on an extra curricular basis.

2. Pre and post testings will evaluate each student's work.

3. Diagnostic and evaluative tests, (Peabody Individual Achievement Battery) will be administered before and after the duration of the program to allow more time for instruction.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
CATHOLIC HOME FOR GIRLS - READING AND LANGUAGE ARTS
(Summer Component)

GOALS SET:

Reinforcement and basic instruction in:

1. Reading

   a. Phonics
   b. Vocabulary (sight and meaning)
   c. Comprehension
   d. Study Skills
   e. Research Projects
   f. Book reports
   g. Library skills
      (1) Dictionary
      (2) Encyclopedia

2. Composition

   a. Sentence structure
   b. Grammar - rules and function
   c. Spelling - rules and function
   d. Penmanship
   e. Letter writing
      (1) Reports
      (2) Essays
      (3) Posters

3. Language Arts

   a. Discussion of books read
   b. Oral and written reports on:
      (1) Film viewing
      (2) Record and tape listening
   c. Creation of posters
   d. Discussion of extra curricular activities

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Use of library and reading center

   a. Fiction for avid readers
   b. Paperbacks for reluctant readers

c. Paperbacks for teenagers
d. Paperbacks for below-level readers
e. Comic books with tapes

2. Programmed Instruction in:

   a. Grammar
   b. Spelling
   c. Vocabulary

3. Games and drill devices for grammar reinforcement.

4. Film-strip viewing

5. Tapes for listening

6. Continuous Progress materials for:

   a. Grammar
   b. Spelling
   c. Reading in content areas
      (1) Social studies
      (2) Science

7. S.R.A. Dimensions in Reading

8. S.R.A. Reading for Understanding

9. Controlled Reader Laboratory (McGraw-Hill)

10. Reading Attainment Series (1-2) Botel

11. Kaleidoscopic Readers - (Remedial Junior High)

12. Reading Skill Kits E.D.L.

    a. Sciences
    b. Social studies
    c. Reference skills

13. Peabody Individual Achievement Battery

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
GIRARD COLLEGE SUMMER SCHOOL
(Summer Component)

GOALS SET:

1. To make-up scholastic deficiencies.

2. Work to remove specific weaknesses that caused placement in summer school.

3. Work on the boys' study habits in order to insure future success.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

There was a great deal of individual instruction given to each boy because of the low pupil-teacher ratio. One hour of study was provided for each hour of classroom instruction; in addition, there was a study period of one hour every evening during the week.

GOALS ATTAINED:

We believe that a study of the standardized tests taken by the boys compared to one taken in the spring shows overall improvement in both reading and mathematics. The test taken in the summer was an alternate form of the test taken in the spring.

GOALS NOT ATTAINED:

This is the third year of this summer program. We have been attempting to create a scope and sequence of learnings for each area of the summer program.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

There was some classroom supervision of the staff by the administrator of the summer school. It is our aim to work harder in this area next year. As we have an excellent staff in both the elementary and secondary areas, we look to great progress and a better program in the coming year.

GOALS ATTAINED:

1. Interest in Reading stimulated through individualized instruction.

2. Reading and language arts level increased (1 to 2 years grade level) indicated by Peabody posttest.

3. Typing and spelling functioned in letter writing and reports.

4. Good reading habits established as seen by directed choice, frequent discussion of reading materials and independent reading out of class.

GOALS NOT ATTAINED:

Because of emotional needs and the psychological aspects of their lives, a certain small percentage did not make any noticeable progress. A positive relationship with the faculty was established, however, in most cases though not necessarily academically oriented.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. Peabody Achievement Tests will be administered before June 27 and after August 6 to insure full six weeks of instruction in the school program.

2. Additional cultural experiences will be planned at least once a week for afternoons and weekends. These will supplement the work of the language arts program for feedback in discussion and composition work.

INSTITUTION FOR NEGLECTED AND DELINQUENT CHILDREN:
GUARDIAN ANGEL HOME
(Summer Component)

GOALS SET:

1. Increase "survival" reading and math skills.

2. Increase awareness and ability to deal with problems which are a part of independent living (e.g., money-management, shopping, cooking, finding an apartment).

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Math- working on basic skills, practice in balancing a budget, a food shopping trip, work with calculators.

2. Reading - work on basic skills in word attack and comprehension practice in reading a newspaper, reading an apartment lease, etc.

GOALS ATTAINED:

Goal #1 was achieved - individual evaluations completed by teachers suggested that most girls increased their reading and math skills at least to minimal degree.

GOALS NOT ATTAINED:

Goal #2 was not achieved to the degree originally anticipated. Some of the girls needed much work in basic skills leaving little time for practical application.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Next year, I anticipate structuring in more practical experiences such as food shopping, apartment-hunting, job-hunting, handling a checking account.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
NORTHERN HOME FOR CHILDREN
(Summer Component)

GOALS SET:

Stabilize and/or remediate reading and math content areas.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Small homogenious groups may size 5-1 (one class) to instruct on an individualized approach.

GOALS ATTAINED:

Stabilization in math content area and an average increase of 9 months grade level change in standardized test. (post). Posttest in reading content area (basics show 8 month-average-grade-level change.)

GOALS NOT ATTAINED:

To increase reading grade level one year - the goal set was too high and needed to be reconsidered according to individual child - Math area - 1 year increase but many skills correct on pretest were splinter skills not cognition of function.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

To develop more individualized goals rather than group to allow the child to develop in relationship to where he is presently operating and to reevaluate each child's progress and/or regress and determine approaches, materials needed to attain individualized goal.

INSTITUTION FOR NEGLECTED AND DELINQUENT CHILDREN:
SALVATION ARMY CHILDREN'S HOME
(Summer Component)

GOALS SET:

To provide remedial reading and Math on an individual basis as well as supportive activities to reinforce the above goals.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Group and individual reading and math programs along with an incentive program to keep the children's interest at a high level.

GOALS ATTAINED:

The reading and math programs were very successful. This is shown by having approximately 98% attendance. It is further proven when several readers and non-readers each read 40-50 books in an eight week period.

GOALS NOT ATTAINED:

We had projected ten (10) trips per week. This would have conflicted with our reading and math program considerably so they were cut to one (1) trip per week.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

No changes should be made. The program format is very good and should remain as is.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
SOUTHERN HOME FOR CHILDREN
(Summer Component)

GOALS SET:

The goals of the summer program were to provide intensive remedial mathematical and reading instruction to identified youngsters within the existing population of Southern Home for Children.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Certified teachers carefully diagnosed identified students and individually prescribed a sense of specific skills to be taught. Thoughout the program these skills were developed. Diagnosis was continuous and a student moved to a more difficult skill only when he had achieved proficiency in the area in which he was working. The majority of the instruction was done on an individual basis.

GOALS ATTAINED:

Test results indicate that the students were generally able to achieve a significant portion of individually prescribed goals.

GOALS NOT ATTAINED:

Because the goals were so specific, the students were generally able to attain them. The population serviced at Southern Home is primarily that of severely disturbed youngsters who have serious educational and emotional difficulties. Therefore, the teachers were occasionally called upon to deal with emotional interferences which sometimes impeded the attainment of initial goals set.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

At present the staff is generally satisfied with the Title I program at Southern Home for Children. In the fall, the plan is to increase the teaching staff in order to service more children at more frequent intervals.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
ST. JOSPEH'S HALL FOR GIRLS
(Summer Component)

GOALS SET:

The goals of the summer compcnent of our project were to help the girls increase their skills in the Math and Reading areas. The girls were instructed in Reading in the areas of comprehsnsion and word recognition, skills utilizing current reading materials, and the basic skills areas in Math utilizing the Philadelphia math levels exams. Also, the girls were exposed to areas of the fine arts. The areas were blended to reinforce the learning materials used in the classrooms.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Activities employed to attain these goals were adminitration of pre and post levels tests in the Math and Reading areas. This was coupled with cultural trips throughout the Philadelphia area.

GOALS ATTAINED:

The basic goal attained was advancement by the girls in the Reading and Math areas. This advancement was shown by their results on the Math and Reading levels test which are standard in the Philadelphia Educational system. A culminating program was also performed to show achievement as a result of instruction in the fine arts areas.

GOALS NOT ATTAINED:

The goals not attained were advancing the girls up to their proper grade levels in Reading and Math. This belief is based on the fact that many of the girls were so far below their grade levels, indicating a continued need of small group or one-to-one instruction.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Recommendations that will aid in the attainment of goals in the future years are continued tutoring and continued exposure ot areas of cultural enrichment.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
ST. VINCENT'S ORPHANAGE
(Summer Component)

GOALS SET:

1. To provide a strong readiness program for Reading and Math and also to incorporate arts and crafts to stimulate muscular development and to aid emotional development. (K)

2. To provide individual attention in order to strengthen basic skills in Reading and Math and to provide opportunities for experiences which will broaden their backgrounds on the social aspects of life. (1-3)

3. To provide individual attention in order to strengthen basic skills in Reading and Math and also to provide opportunities outside the classroom to try to develop a greater self-awareness and self-confidence in the children.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Teachers provided individual instruction in reading skills, math skills and language arts skills for those students whose records and test scores were below grade level. Classes were held four days per week. The length of a period was 45 minutes each day. During the afternoons of the six week program the counselors took small groups of children out for various cultural experiences. Each Friday a field trip was planned for the entire group. Places of interest in and around Philadelphia were visited.

GOALS ATTAINED:

Reading

At the end of the six-week program the Merrill Test for Reading Readiness indicated that 80% of the children were ready for Pre-Primer work. (K)

At the end of the six week program the Scott Foresman Primay and Intermediate Reading scores for Posttest B indicated that 90% of the children exposed to the program made progress. The Merrill posttests indicated progress of at least six months growth for the average child. (1-6)

Math

At the end of the six-week program, the Scott Foresman Primary and Intermediate Math scores indicated that 80% of the children were stronger in the basic skills of whole numbers. Metropolitan Achievement Test Intermediate B indicated 90% of the children progressed in knowledge of basic arithmetic including the use of fractions. (K-6)

GOALS NOT ATTAINED:

In my estimation, the anticipated goals were achieved as indicated by test scores, teacher evaluation and most of all by pupil response.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Since our student body changes basically each year but is made-up of dependent, neglected children, the needs seem to be similar and I feel the program offered should remain basically the same.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
ST. VINCENT'S RESIDENCE
(Summer Component)

GOALS SET:

1. Reinforcement and instruction in basic skills of reading.

2. Reinforcement and instruction in basic skills of other related language arts.

3. Individualized instruction in spelling, handwriting, and grammar with functional application of each to the language arts program.

4. Greater achievement in practical use of composition, creative writing, essay, and poetry.

5. Increased interest in reading books and periodicals.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

1. Reading for pleasure

2. Reading for a purpose

3. Research projects

4. Seminar dynamics

5. Library skills

6. Use of dictionary and encyclopedia

7. Reading with tapes

8. Film viewing with tapes for listening

9. Programmed grammar reinforcement

10. Instructional kits for continuous progress

11. Language games for remedial drill and reinforcement

12. Varied instructional materials and activities for individual needs

GOALS ATTAINED:

1. Good reading habits were established as seen by choice of reading matter, frequency of use of books and intelligent discussion of reading materials.

2. Individualized reading instruction stimulated further interes in Reading.

3. Typing made functional in writing business letters and research reports.

4. Reading level showed a marked gain of one or two grades as per Peabody Achievement Test Battery.

5. Language arts remedial program showed same percent of gain in same test battery.

GOALS NOT ATTAINED:

For psychological reasons and due to some emotional disturbance some girls were not able to put forth effort in class participation, to cooperate with teachers in learning tasks, or achieve instructional goals. Hence, their progress was slow and in some cases negligible in all areas of learning. Related subjects such as music and art were offered to them.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. An increase in the number of cultural experiences on an extra curricular basis will be planned.

2. Tests will be administered before and after the summer sessions so as to afford full six weeks time for the program.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
STENTON CHILD CENTER
(Summer Component)

GOALS SET:

Identify specific deficiencies in reading and mathematics for all eligible Title I children. Provide remedial intervention through use of methods and materials developed by a staff of professional teachers including 1 reading specialist and 1 mathematics resource teacher. The program will include related educational experiences such as craft work and field trips. Children involved in the program should advance 1 level in reading and mathematics.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

The 7 week program will operate a total of 175 hours during which each child will receive an average of 20 hours of instruction each week. A minimum of 1 hour a week will be concentrated on improving reading and mathematics skills. A classroom teacher-pupil ratio of 1 to 6 and no more than 1 to 8, and in addition, individual instruction provided by the reading and mathematics teachers will maximize the learning experience.

GOALS ATTAINED:

Approximately 95% of the participating children demonstrated a positive attitude toward the basic skills program and toward learning in general. They were eager to begin each day's activities; behavior problems were minimal and were readily resolved.

At least 60% of the children advanced 1 level in reading and mathematics as measured by pre and posttesting. (Tests used: The Philadelphia Mathematics Evaluation Tests, Lower and Middle Schools; and the Sucher-Allred Reading Placement Inventory.)

Field trips to the library, museums, the Philadelphia Naval Base, etc., and numerous craft projects were successful extentions of the structured classroom experience.

GOALS NOT ATTAINED:

Approximately 40% of the children failed to advance full level in reading and mathematics. However, most of these children were motivated to approach a learning process with more positive effort. In many instances their participation in the program was interrupted because of illness, clinic and agency appointments or discharge form the institution.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

Extend the assigned hours of the reading and mathematics specialists from 60 hours to 90 hours during the course of the 7 week program and/or add 1 reading secialist to the teaching staff.

Expand the extra curricular activities and include more contact and 1 on 1 games and sports. This will provide practical application of skills learned in the mathematics and reading components of the program.

INSTITUTIONS FOR NEGLECTED AND DELINQUENT CHILDREN:
YOUTH SERVICE INCORPORATED
(Summer Component)

GOALS SET:

Academic - To explore life through literature while simultaneously developing and/or expanding word recognition and comprehension skills.

Vocational - To broaden our youths' knowledge of the range of occupations available upon graduation from high school and/or post-graduation study.

Cultural - To expose our youth to experiences that will stimulate their interest in and appreciation of the cultural arts.

Recreational - To engage our youth in activities that are enjoyable while simultaneously developing and/or expanding athletic skills, team skills, and sportsmanship skills.

ACTIVITIES EMPLOYED TO ATTAIN THE GOALS:

Academic - Six reading classes of 30 minutes each, 4 days a week.

Vocational - Enrollment at JEVS Work Adjustment Center. Trips to post office and engineering firm. Speakers from Negro Tradesman Union, police department, Coca Cola Bottling Company. Workshop on filling-out job applications.

Cultural - Trips to Dance Theatre of Harlem, Independence Hall, Robin Hood Dell Concert, Mother Bethel A.M.E. Church.

Recreational - Swimming, arts and crafts, trips to Hershey Park, Washington's Crossing, Olympic (sports) Day.

GOALS ATTAINED:

All goals of the summer program were successfully attained by various methods. The reading skills of numerous students increased (reading test utilized). Students wrote articles expressing their views about the activities in the summer program newspaper and staff responded favorably about the program.

GOALS NOT ATTAINED:

The four goals of the summer program were successfully attained.

CHANGES SUGGESTED BY PROJECT ADMINISTRATOR:

1. Monies are requested for a math instructor(s) to increase our students' operational skills in the basic areas of mathematics.

2. The vocational component of the program will lose a valuable service with the loss of monies for the JEVs program.

3. Cultural experiences are constricted with monies available for out-of-state events.

APPENDIX

PROJECT ADMINISTRATORS AND EVALUATORS

PROJECT ADMINISTRATORS AND EVALUATORS

EVALUATION TEAM	PROJECT	ADMINISTRATOR
Team Leader: Robert N. Sebastian		
Robert N. Sebastian	Computer-Managed Instruction	Sylvia Charp
Robert N. Sebastian, David Patton*	Learning Centers	Lore Rasmussen
David Patton	Multimedia Center	Charles McLaughlin
Robert N. Sebastian, David Patton	Aide Services	Leontine Scott Charles McLaughlin
Ethel K. Goldberg	Reading Improvement Through Teacher Education	Charles McLaughlin
Team Leader: Arnold Escourt		
Arnold Escourt	Benchmark	Edmund J. Forte
Arnold Escourt, Fleta B. Waters*	Reading Skills Centers	Ida Kravitz
Carrolyn K. Iwamoto	Comprehensive Mathematics (A,B, and C)	Alexander Tobin
Arnold Escourt, Fleta B. Waters*	Improvement of Reading Skills "C"	Charles McLaughlin
Arnold Escourt, Fleta B. Waters	Primary Reading Skills Center	Charles McLaughlin
Fleta B. Waters	School Community Coordinators	Alphonso Williams

PROJECT ADMINISTRATORS AND EVALUATORS (Continued)

EVALUATION TEAM	PROJECT	ADMINISTRATOR
Team Leader: Marion Kaplan		
Marion Kaplan, Janice Atkins*	Bilingual Education	Charles McLaughlin
Marion Kaplan, Janice Atkins	Motivation	Rebecca Segal
Team Leader: William Loue		
William Loue, Judith Green*	Operational Individual	Charles McLaughlin
William Loue	Individualized Education Center	Charels McLaughlin
William Loue, Lisbeth R. Sklar*	Education in World Affairs	Margaret Lonzetta
Judith Green	Institutions for Neglected and Delinquent Children	Robert F. Magliano
William Loue	Summer Reading Readiness	Charles McLaughlin
William Loue, Judith Green, Lisbeth R. Sklar	Affective Education	Norman Newberg
Team Leader: Robert Offenberg		
Robert Offenberg, Bob Epstein, Carlos Rodriguez-Acosta	English to Speakers of Other Languages	Eleanor L. Sandstrom

PROJECT ADMINISTRATORS AND EVALUATORS (Continued)

EVALUATION TEAM	PROJECT	ADMINISTRATOR
Patricia B. Young	Intensive Reading for Secondary Students	Philip Pitis
Joseph Gavin, Patricia B. Young	District 6 Reading	Betty Ross
Thomas J. Clark, Judith Zernik	District 1 Reading	Patricia Twisdale
Thomas J. Clark, Judith Zernik	District 4 Reading	Elizabeth Berry
James Scheib, James P. Comerford	District 2 Reading	Rhonda Handelman
James Scheib, James P. Comerford	District 3 Reading	Doris Peltzman
Alan Solomon, Joseph Wroblewski	District 5 Reading	Robert Shatzer
Alan Solomon, Joseph Wroblewski	District 7 Reading	Verneta Harvey
Team Leader: Thomas McNamara		
Thomas McNamara, Judith Goodwin Anne Lukshus	Follow Through (ESEA Title I Component)	Leontine Scott
Kenneth Prusso, Mildred Asano	Preschool Child Development	Constance E. Clayton
Herman Carter, John McKinney	Bridge	Leontine Scott

*Project generally were assigned to evaluation teams under the leadership of research associates. An asterisk following a person's name indicates that major responsibility within the team was assigned to that person.